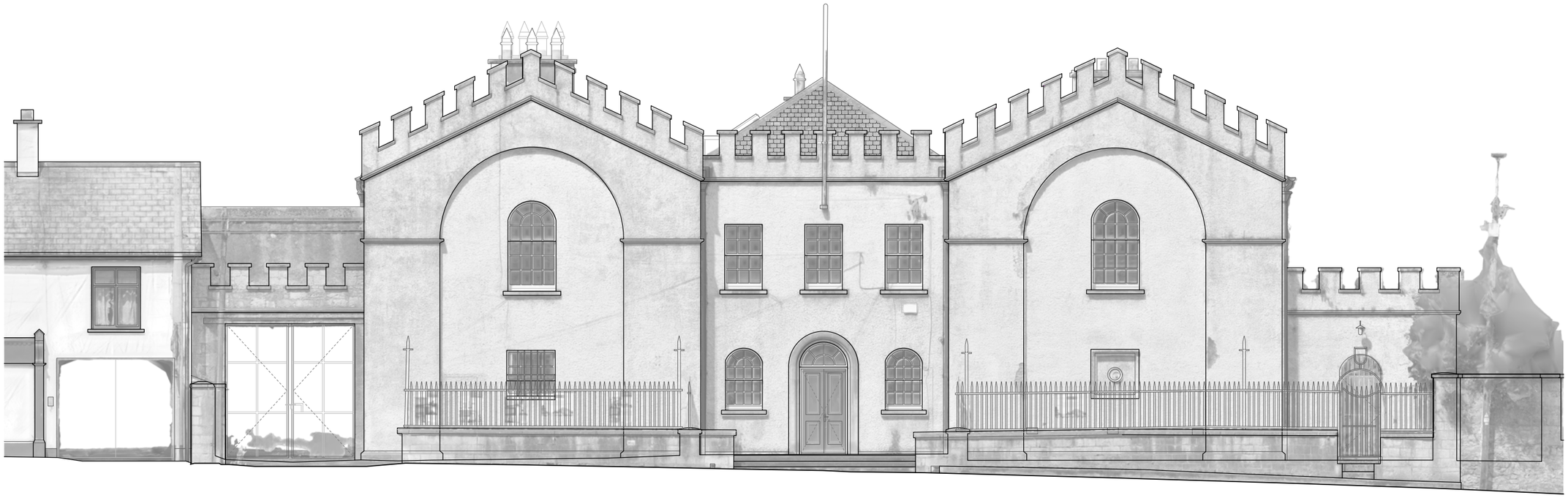
Howley
Hayes
Cooney

Birr Courthouse, County Offaly



Design Statement and Architectural Heritage Impact Assessment

August 2024

ARCHITECTURE

Howley Hayes Cooney is a Dublin based practice that combines many diverse talents, with a belief that great architecture creates a sense of time and place that enriches our lives. Throughout thirty-five years of practice, we have established a strong design ethos with particular emphasis on creativity, collaboration, and context. Our work includes - the design of new contemporary buildings, the adaptive reuse of existing buildings and the creative conservation of many important historic buildings and places. We have earned a strong and trusted reputation from our clients, peers, consultants, and others with whom we collaborate, and the quality of our work has been recognised through many national and international awards.

We are a design led practice working at the intersection of contemporary design and creative conservation; and we are passionate about great buildings and places of all ages.
Our creative approach to conservation is centred on our belief that change is continuous, and buildings are effectively 'alive' and resilient enough to evolve over time to serve new viable purposes.

Skilful design, coupled with a scholarly understanding of history and significance is essential to deliver sensitive interventions that will sit comfortably within or beside historic fabric. Sometimes radical intervention is necessary, to add new layers of meaning, or to remove damaging accretions applied previously. If guided by an understanding of history and significance, and designed sensitively to respect these inherent qualities, the 'aesthetics of age' will be preserved, and the building given new meaningful purpose. Conservation is also an act of sustainability, both in terms of retaining the energy embodied within a building while preserving the 'sense of place' it engenders.

Our working mantra is to do "as little as possible but as much as is necessary" to ensure appropriate protection to historic buildings and places, while creating opportunities and imaginative design solutions for our clients. Our conservation work covers a wide range of historic buildings and places, many of national and international cultural significance, ranging in date from the twelfth century to the twentieth century.

DESIGN TEAM

Architect
Howley Hayes Cooney Architecture

Structural Engineer
CORA Consulting Engineers

Building Services Engineer
Hayes Higgins Partnership

Cost Consultants
Austin Reddy Consultants

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ISSUE

Revision	Stage	Author	Date
-	Issue for Planning	LOC / CG	00/08/2024

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ARCHITECTURE


WITNESS
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1.0 Introduction

Built in 1810, or earlier, the Birr quarter sessions is an early example of a nineteenth-century Irish courthouse. It was constructed at the outset of a very active period of civic and legislative building in Ireland in response to evolving legislative requirements. The front elevation of the courthouse is little changed since it was constructed, and is easily recognisable from the drawing of 1826 in Thomas Lalor Cooke's book on Birr, The History of Parsonstown. Cooke described the building as a 'handsome, convenient building, sufficiently extensive for the business of the county.' The building ceased to function as a courthouse in 2013 when court sittings were transferred to Tullamore.

A symmetrical, five-bay façade, that includes matching castellated gables arranged on either side of a recessed central entrance, add an air of importance and authority to the building. The architect is unknown, but it shares similarities with Daingean courthouse, which was built approximately three years earlier as the county courthouse.

Standing on Townsend Street, north of Emmet Square, the Birr courthouse replaced an older sessions house and gaol located just south of the river, at the corner of Castle Street and Main Street. This old courthouse also served as a market house, and accommodated the highest county courts until the mid-sixteenth century, at which point they moved to Daingean, and subsequently to Tullamore in 1835.

Birr Courthouse has not held a court proceeding since 2013, and has not been used for any purpose in the intervening years. Offaly County Council inherited the building from the OPW in 2021, and now intend to refurbish the building and rear yard for cultural and community use, creating a flexible suite of spaces for a variety of uses. A feasibility plan commissioned in 2019 by Birr 20:20, a community organisation group, proposes to re-use the building as a multi-purpose community space, a digital / connected hub, as well as for arts and culture purposes. In 2021 Offaly County Council commissioned Howley Hayes Cooney to prepare a Conservation Management Plan, which was prepared in consultation with the Birr 20:20 group. This Plan was evolved further into a Conservation Masterplan, which included initial design proposals for the site, and set out an outline brief.

The CMP, masterplan and feasibility plan has formed the basis for the planning proposals and this report has been prepared to support the Part 8 planning application.

Figure 1 - External elevation of Birr Courthouse today

2.0 Brief History of Birr Courthouse

Early History

Birr is an ancient Irish town, which takes its name from the Irish word Birra meaning standing water. It became known as Parsonstown circa 1620, following settlement by Cromwellian colonists. The first session house and market house in Birr dates to this period, according to Cooke's history, 'the Gaol formerly stood on the south side of the old bridge. It was there in the year 1628, and until a recent period. Part of it is yet standing.' In 1800 magistrates were still assembling in the 'old market-house of Birr'. Cooke refers to the building of Birr Barracks commencing in 1809, with completion within three years, and notes that the 'present Sessions House and Bridewell of Birr, were erected about the same time'. He includes an elevation drawing of the courthouse in his book from 1826, one of nine depictions of buildings and places in the town. The 1822 map of Parsonstown, possibly drawn by Cooke, was the first real map of the town since the completion of a British military map from 1691, the latter clearly noting the old goal south of the river.

At the turn of the nineteenth century changes in legislative proceedings led to restructuring of the court system. These changes were particularly evident in the countryside, in smaller courts, with the gradual replacement of the traditional and more informal manor court process, which had been in operation since the seventeenth century. According to the History of Birr in 1797 the first assistant barrister and chairman were appointed for the King's County (former name for County Offaly,) under the newly passed Civil Bill Act. Henry Doyal presided at the first Quarter Sessions held in Birr.

The Petty Sessions Act of 1827 divided counties into petty sessions districts, so named to deal with 'petty crime' such as poaching, illegal distilling, licencing and smaller employment disputes. These sessions were presided over by a magistrate, and without a jury. Quarter sessions were held four times a year in designated quarter sessions courtrooms, often with several quarter sessions districts per county. Juries were present at quarter sessions as more serious crimes were tried within these courts. The highest court proceeding within each county was the assizes, where the most serious criminal cases were heard, and these were typically held in the largest or most established town in the county. In the case of Offaly, assizes were held in Daingean courthouse at the beginning of the nineteenth century, however, by 1835 they had moved to Tullamore. Assizes and quarter sessions were abolished in 1924, under the Courts of Justice Act, and the circuit court and district court systems were established in their place.

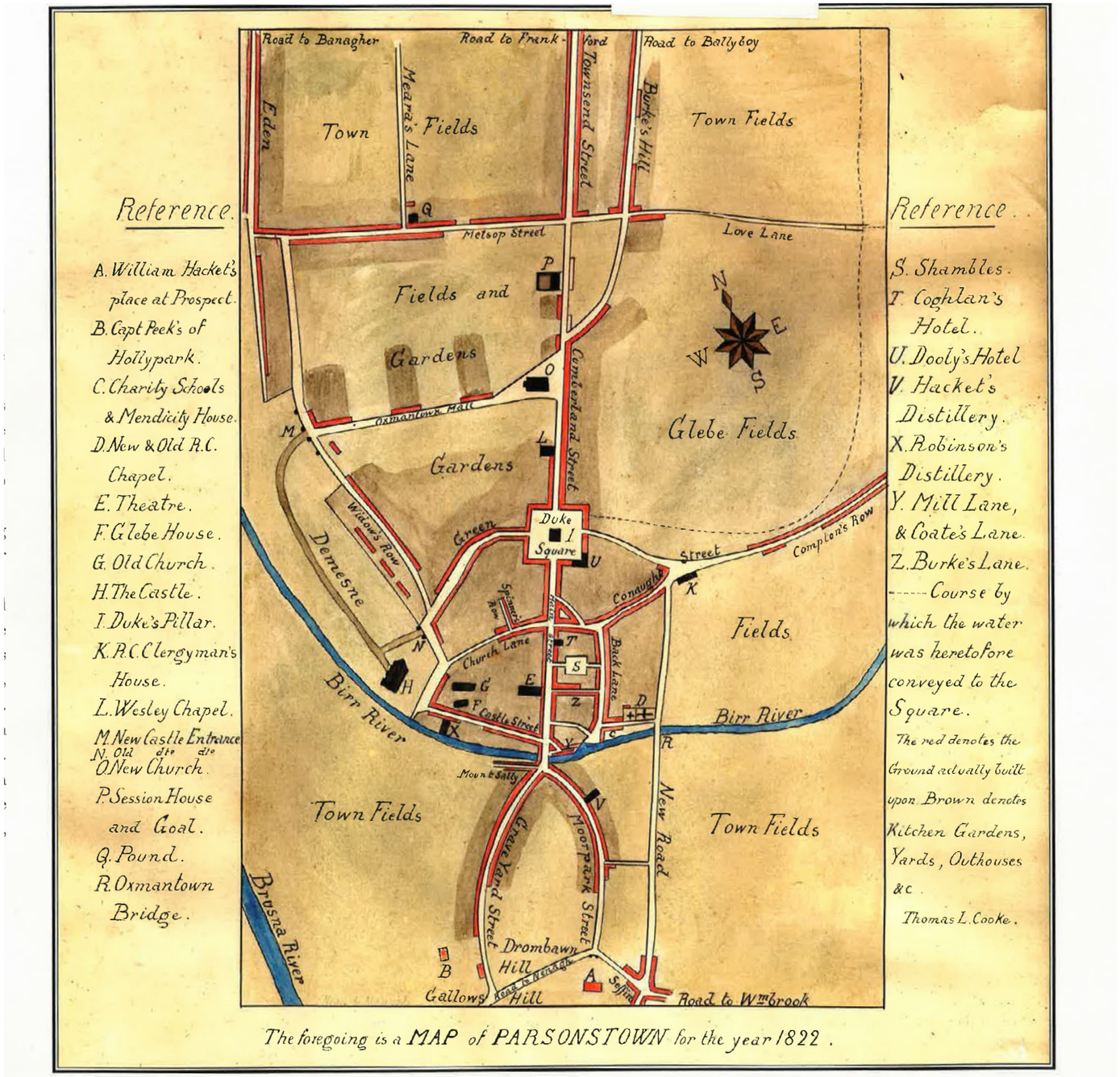

Figure 2 - The 1822 Map of Parsontown

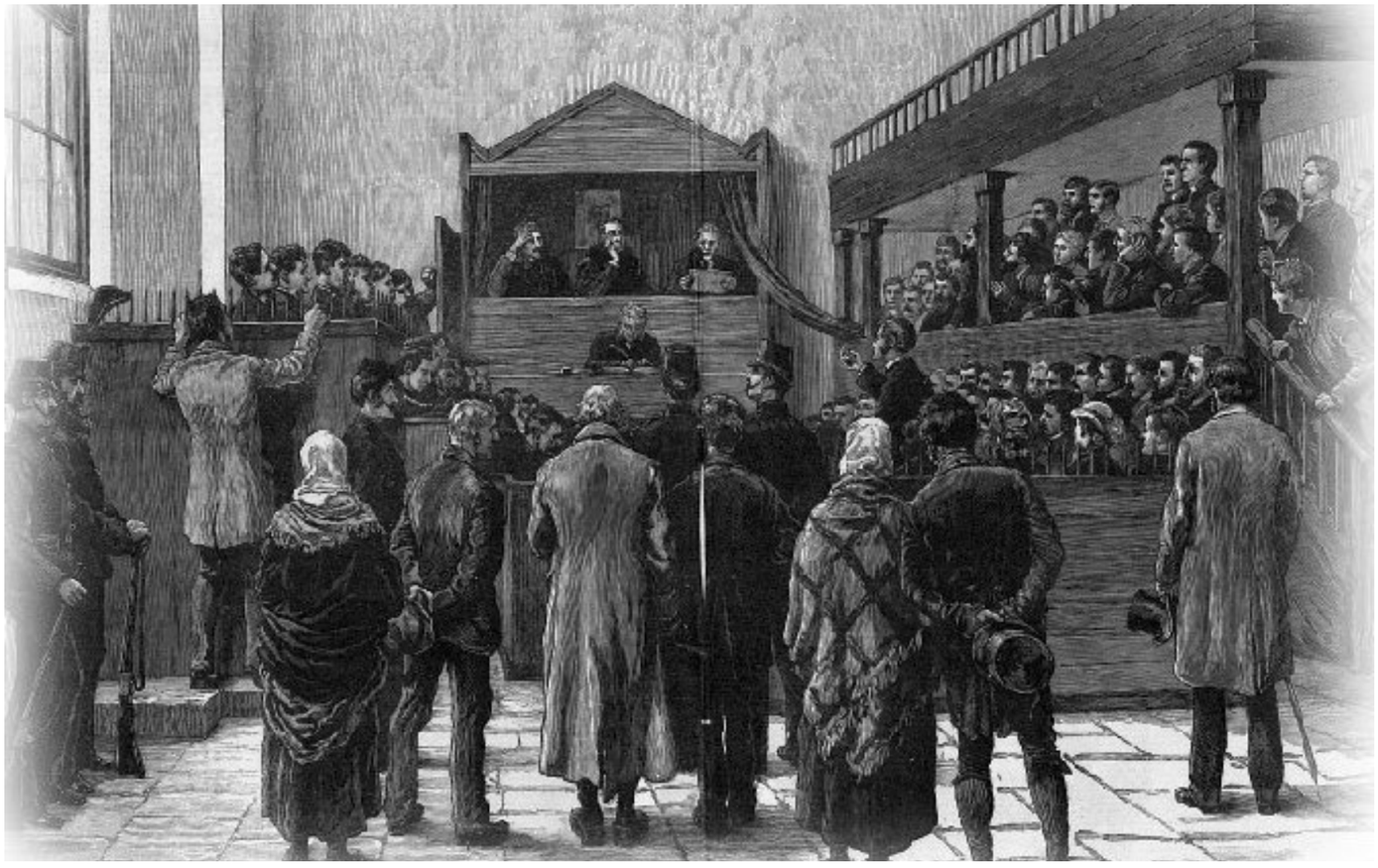

Figure 3 - Court in session in the Claremorris courtroom

Thomas Lalor Cooke

Cooke's early history of the town of Birr is a wonderful account of this interesting Irish town; a rare text ,which serves as an excellent foundation for anyone researching the early development of the settlement. Thomas Lalor Cooke was a successful lawyer, a collector of antiquities and a respected historian. In 1830 he was appointed the first Sessional Crown Solicitor in Ireland. During his lifetime he fell in an out of favour with the Earls of Rosse, mainly due to his involvement in the Crotty Schism, but he was an avid collector, and his collection was noted to be 'next in importance' to that of the Royal Irish Academy.

He describes the session house in his book as

'...a handsome, convenient building sufficiently extensive for the business of the county. The Bench, Jury-boxes, &c. are prettily contrived, and unlike to session houses in general, there is a good outside hall to the one now being described. The Grand Jury Room is spacious in proportion to the criminal business to be transacted in it. At the south end of this building is the Bridewell, in which the county treadmill has been recently erected.

The General Quarter Sessions of the Peace are held in this town four times in every year, viz: in January, April, July and October. In the session house is also held the manor court, in nature of a court baron, before a seneschal, appointed by the Earl of Rosse. Its jurisdiction, as to amount, extended by the original patent to all pleas of debt, transgressions, contracts, detinue, causes and other matters which in debt and demands did not amount to forty shillings Irish arising within the manor. . . The present Seneschal holds his Court precisely at twelve o'clock on the First Monday of every month. There is also a power of holding a Court-Leet and Frank-pledge here twice in every year, but it is now disused.'

At the turn of the nineteenth century Birr was a 'thriving town' and the Parsons family, the Earls of Rosse, were much involved in the development of the town. Residing in their newly re-built Gothic Revival castle, the Parsons family was heavily involved in the administration of the county, with Thomas Clere Parsons, brother of the Earl of Rosse, Assistant Barrister for the county.

The Crotty Schism

The early decades of the nineteenth century were fraught with contention between Protestants and Catholics, as people adjusted to the lifting of penal restrictions and the 1798 rebellion. Tensions were evident on both sides, and Sir Lawrence Parsons was considered a radical in protestant circles as he had opposed the Act of Union. In Birr, a dispute over money resulted in a highly publicised local schism, termed the 'Crotty Schism'. This related to a new Roman Catholic chapel which was built between 1817-1824, when a young curate, Rev. Michael Crotty, became embroiled in allegations of mismanagement of funds for the chapel. Cooke was established as chairman of a new committee to manage the funds, though it was never clear if any mis-management of monies had occurred. The dispute escalated and ultimately ended up before the courts, in the Quarter Sessions courtroom, and resulted in a splintering of the Catholic church within Birr. Rev Fr. Kennedy, administrator of the chapel, regained his position from Crotty and held mass in the chapel, while Crotty established his own 'church' in a large rented house, where worship was conducted independently of the parish priest and bishop. In 1836 a new church was constructed under the leadership of Michael Crotty and his cousin William, but this new sect eventually collapsed due to internal tensions about the future of the church, which included considerations to form an alliance with the Church of England.

The town of Birr was not badly effected by the famine, the army barracks provided trade and employment and Birr Castle provided famine relief works.

Historical Maps

The first edition ordnance survey map, surveyed in 1838, notes the 'courthouse' and 'goal', the latter distinguishable by its extended wing to the west. A recessed central bay to the front is visible, while the area between the two wings to the rear is completely infilled.

The second edition ordnance survey plan, surveyed in 1908-10, shows only a square plan, with the recessed central bay to the front and the south range or cell block omitted from the plan. This was customary by this time, in order to protect or hide the location or any detail of the bridewell. A separate bridewell is also noted further south of the court-house and an enclosed rear yard is visible on both. Given the height of the boundary wall, this might have served as the exercise yard for prisoners during internment and the location of the treadmill mentioned by Cooke.

The building plan shown on the 24 inch scale Ordnance Survey maps published in 1879 indicates a much simpler internal arrangement than the current configuration, and could have been based on the original building plans for the courthouse. It is not known if the surveyors visited the interior at the time of mapping, and this plan does not match the earlier OS maps.

Figure 4 - First Edition OS 6 inch map, Surveyed in 1838

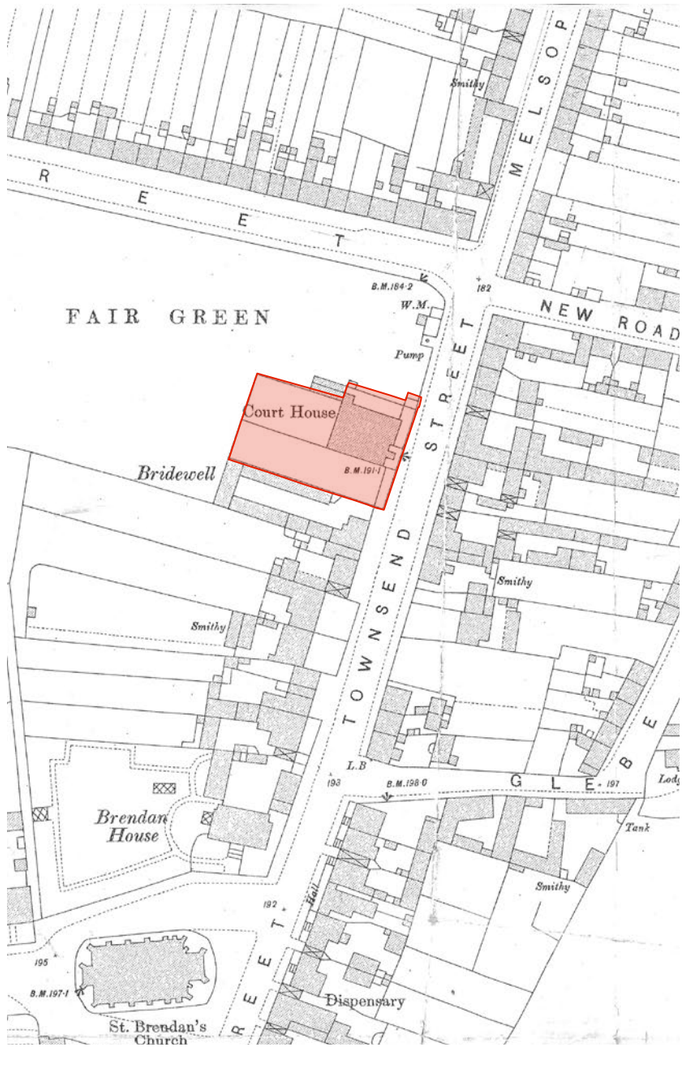

Figure 5 - Second Edition OS Map, surveyed in 1909, showing the Birr courthouse

The Birr Courthouse Exterior

Irish courthouses from the early eighteenth century generally maintained a more vernacular character, however, the employment of the architect James Gandon to design the neoclassical Waterford courthouse in 1784 had a marked impact, becoming a prototype for many of the courthouses which followed, including Daingean and Birr.

In the book, Courthouses of Ireland, the Birr courthouse is described by Niall McCullough as a 'classical temple' style, consistent with the vast majority of typically neo-classical courthouses that were constructed in the pre-famine period of the early nineteenth century. The symmetrical five bay façade and regulated fenestration are still evident on the Birr courthouse today, while the addition of crenulations to the parapets adds a Gothic air, perhaps in an attempt to lend some drama to the façade. A photograph of the building from 1975 shows a small crenelated porch to the front entrance which has since been demolished and a poorly placed doorway into the ground floor room of the south range, which has since been infilled.

As mentioned previously the courthouse bears a strong resemblance to the one at Daingean, constructed three years earlier. Claims have been made that this courthouse was the work of James Gandon, but this has been repudiated by Edward McParland in 1985 on the grounds of quality. The Courthouse in Ballina, built in 1840, also bears some similarity to Birr, with its symmetrical five bay façade and blind insert round headed windows. Ballina Courthouse has been fully refurbished internally so no original internal fabric remains in the courtroom.

Figure 6 - Daingean Courthouse, Offaly

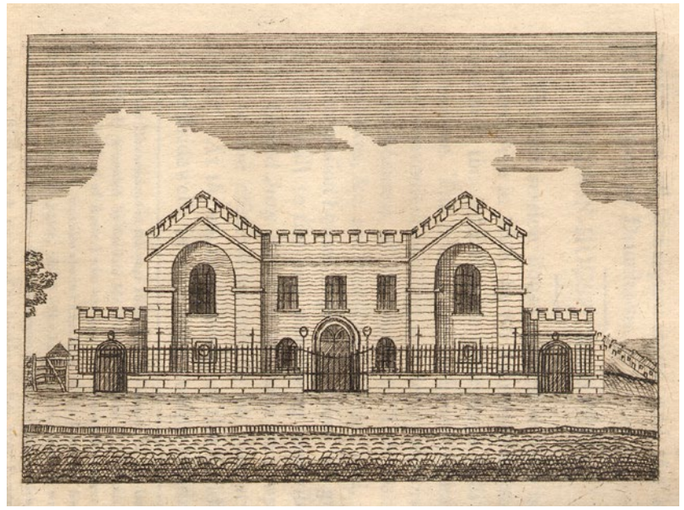

Figure 7 - Drawing of Birr Courthouse (Thomas Cooke 1826)

The Birr Courthouse Interior

In plan the building consists of a central entrance hall, with the north wing housing the double height courtroom, judges chamber and jury room. A small mezzanine wrapping the rear walls of the courtroom is accessed via a timber stair directly from the central hall. The south wing, houses the goal, consisting of eight cells, four to each floor, two small halls and two ancillary rooms with fireplaces. A treadmill was also installed in the Birr bridewell. These devices, first seen in England in 1818, were used for punishment or 'hard labour', forcing prisoners to repeatedly climb steps to facilitate the rotation of a wheel.

The Ordnance survey drawing of the building from 1879 shows a courtroom layout of simpler arrangement internally, with a single dog-leg stair leading from the entrance hall to the gallery level in the courtroom. While the accuracy of this plan is uncertain it may indicate a revision to the original design, or an internal restructuring of the courtroom at some point during the nineteenth century.

The Birr courthouse is one of the earliest examples from this period, of an extensive programme of public legislative building across Ireland, during which various progressions in courtroom design were tested and altered. As noted in Ireland's Court Houses 'relatively few new court houses were built after 1850, there was considerable pressure to extend court house buildings and redesign courtrooms', and these courtrooms were often 'redesigned to improve audibility and visibility, provide specified places for those involved in proceedings, encourage separate access and improve lighting and ventilation'.

In some cases improvements were made to ensure that witnesses could be heard and seen easily, with the addition of elevated witness stands or boxes. The dock, an enclosed or distinct area within the courtroom where the accused was required to stand or sit during proceedings, was often connected to an underground holding cell or cells, as at Kilmainham. This was to ensure that the accused did not cross paths with anyone else during proceedings. By the early to mid-nineteenth century these implementations became considered an indictment of guilt, in particular the bringing of the accused directly from a cell, or the containment of them in a dock, which sometimes incorporated rails or spikes around their perimeter. There is no distinctive 'dock' within the current layout at Birr and it is possible that the accused sat at the back of the room, as at the Green Street courthouse in Dublin.

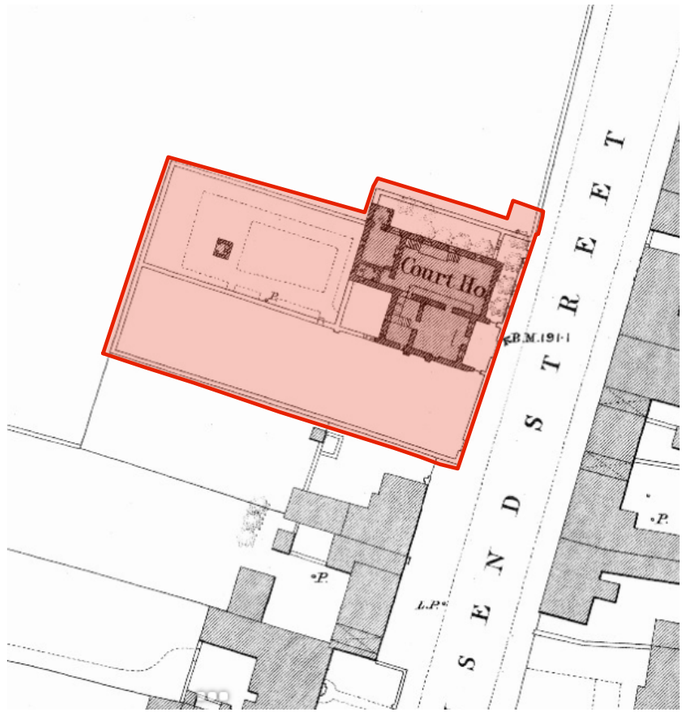

Figure 8 - OS Map 1879, 1:500 series, showing the internal layout of Birr courthouse

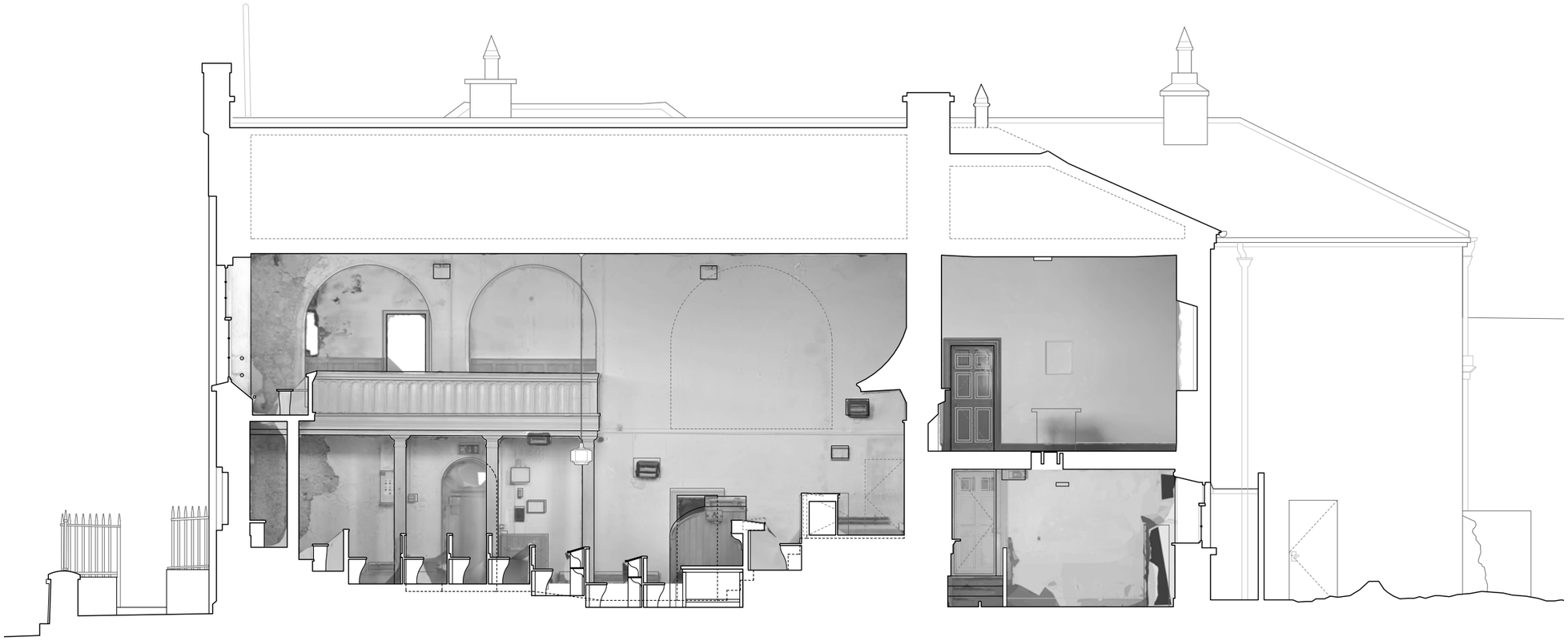

Figure 9 - Existing Courtroom Section

Courtroom Layout

Courtroom proceedings are in a way a form of public theatre. The 'actors' all have different parts of play, from judges, legal representatives, juries, defendants, witnesses, reporters and of course the audience, or general public. Every individual has a role to play and an assigned seat or position within the established set-piece that is the courtroom.

The hierarchy, and importance of each role is clearly established through the layout and plan, the judge taking a prominent and centre position, in this instance with an impressive dias and canopy as a backdrop; the witness box and jury box elevated above the ground floor pews, to emphasise their importance to the proceedings; and the gallery providing excellent views for spectators and lending a further air of spectacle and theatre to proceedings.

Arrival and departure points are clearly distinguished, lest the judge and jury should have to mix with the spectators and public alike. In Birr a small timber gate just inside the entrance notes 'solicitors and barristers only' preventing the public from entering the front part of the courtroom.

The elevated jury box is indicative of quarter sessions arrangement – with a separate room for deliberation. In later court design the witness boxes were introduced, often elevated. Prior to this it was not unusual for a witness to sit on a chair atop a table in front of the judge. Trial by one's peers is demonstrated with the inclusion of the gallery space, where the public sits well above proceedings. The original plan for the courtroom (1879) shows a smaller gallery, along the south wall, accessed through an opening in the wall directly above the elevated witness box. There is an infilled round headed arch in this location in the courtroom which can be visibly traced today in the plasterwork. The inclusion of a raised witness box in the design would have required the relocation of this mezzanine and entrance and may account for this obvious alteration.

The Birr courthouse survey drawings include a sub-level below the main courtroom. This has not been investigated yet but could have been the location of an early coke boiler, serving the heating pipes which are fixed to the benches throughout the courtroom. Heating was introduced to these rooms during the nineteenth century as comfort became more of a concern.

3.0 Statement of Significance

Significance is the means by which the cultural importance of a place and its component parts can be measured and compared. Assessing significance can help guide the policies and proposals for the management and future use of a building, which will respect, preserve and enhance the cultural importance of the site. This can assist in the identification of aspects and areas of a place where only the minimum of changes should be considered, and areas where the significance and character of the place could be enhanced by change.

The Guidelines to the Burra Charter state that;

"Cultural Significance is a concept, which helps in estimating the value of places. The places that are likely to be of significance are those which help an understanding of the past; or enrich the present; or which will be of value to future generations."

There are a variety of categories generally used to evaluate the level of cultural significance of an historic place. For Birr Courthouse this includes – the historical; architectural; and social interest categories.

The assessment of the significance of the Birr courthouse is based on an understanding of its history, phases of development and subsequent alterations. Birr courthouse was built in 1810 to provide a quarter sessions for the town but it ceased to function as a courthouse in 2013 when court proceedings moved to Tullamore. In 2021 it was purchased by Offaly County Council from the OPW and is now in need of full refurbishment.

Historical Significance

The concept of publicly administered justice has existed within society since the Roman times, and arrived in Ireland during the Middle Ages, with the introduction of the feudal system. Throughout the intervening years the judicial system has undergone change notably at the beginning of nineteenth and twentieth centuries, when sweeping law reforms were introduced and with the establishment of the Irish Free State in the twentieth century.

The building stands as a testament to a time of great reform, hardship and suppression in Ireland, during the difficult early years of the nineteenth century and before the onset of the famine. Presided over by a number of notable barristers, such as Thomas Clere Parsons, Barrister-at-Law, brother to an ancestor of the Earl of Rosse, who held the office of Assistant Barrister for King's County until 1825. He was succeeded by John Gibson, William Peirce, Mr. Barron and Sir John Howley.

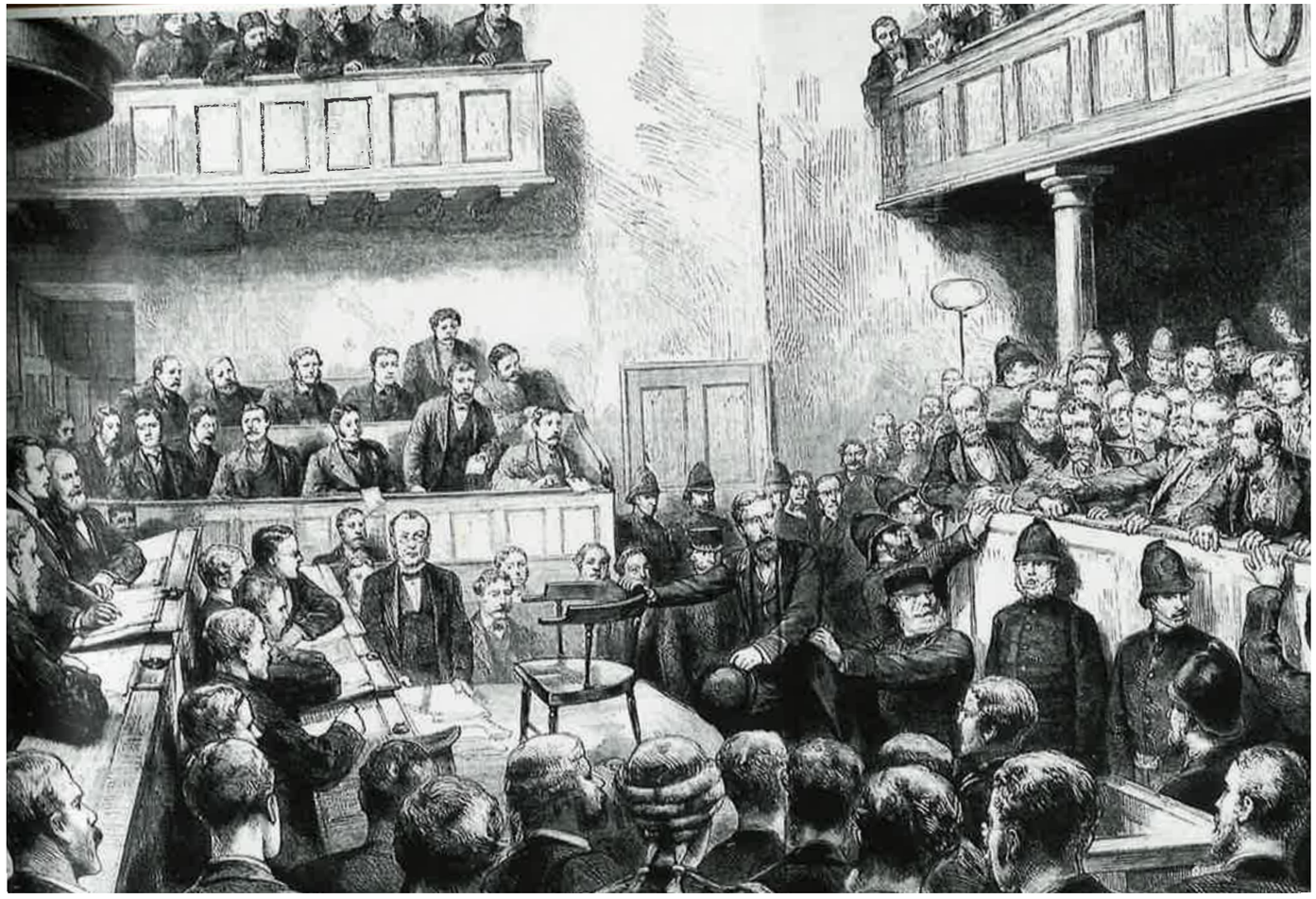

Figure 10 - Mid 19th Century engraving of courtroom interior

After the Great Irish Famine of the 1840s when the midlands were particularly badly affected, land reform became the dominant issue in Ireland with the Protestant Ascendancy owning almost all of the land, which was then tenanted by the Catholic majority. Many significant court cases were held throughout Ireland during this period.

Architectural Significance

The courthouse is an interesting piece of hybrid neoclassical architecture and an early example of a purpose-built courthouse and prison, constructed during this period of legislative change in Ireland. Impressive in both scale and architectural quality, the Birr Courthouse bears a striking resemblance to the courthouse in Daingean. No doubt inspired by the impressive Gandon-designed courthouse in Waterford built in 1784, it incorporates a number of architectural features synonymous with legislative buildings from this time.

The Birr courtroom is a rare example of an intact interior from the nineteenth century, including a distinctive jury box, press stand and witness stand, along with the impressive judges dias and canopy.

Barristers desks are still in place equipped with recessed ink wells, and the early heating system fixed to the joinery is still in place throughout. The gallery appears to be later, or a modified version of the one originally planned, and was possibly altered to accommodate larger crowds and rearrangements below. Connections between the judges room, jury room and water closets all remain in place, as do the fireplaces in these rooms, although the latter are probably later replacements of the original chimneypieces.

It is a priority that steps be taken to conserve this area of the building, which if neglected any further might be irreparably damaged.

Figure 11 - Front Door, repaired in 2021

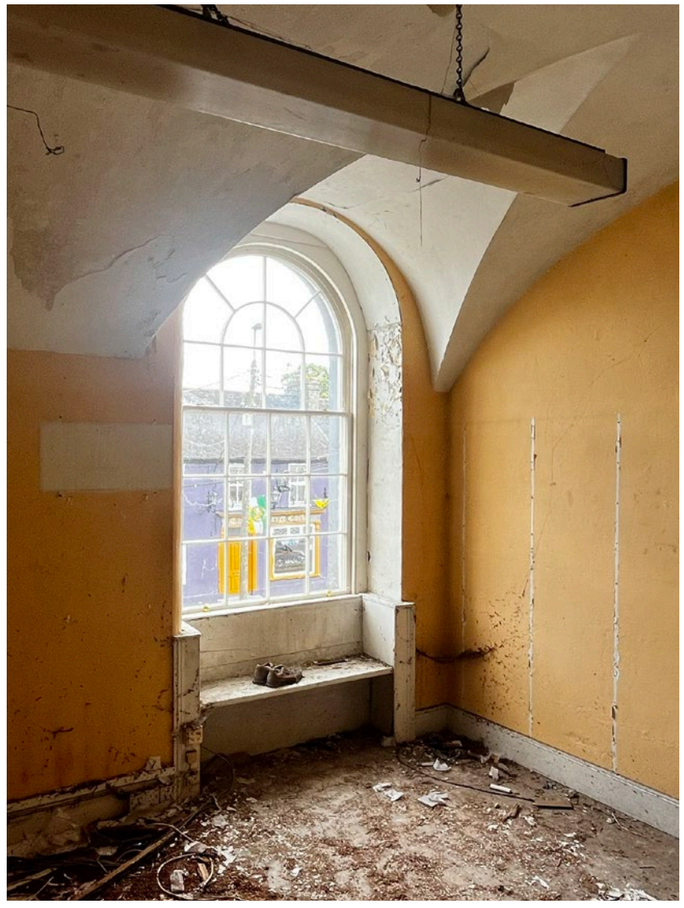

Figure 12 - Existing spoked timber sliding sash window

Social Significance

The inclusion of the courthouse in Cooke's History of Birr, as one of nine buildings or places depicted by a hand drawn sketch indicates its significance within the town during this period. Though Cooke's history didn't include the Crotty Schism this was a significant event in the social history of Birr, resulting in a major splintering of local Catholic church. Cooke himself was embroiled in the dispute that resulted in his alienation from the Parson family. The Crotty trial was one of many important trials held in the new Birr courthouse that impacted significantly on the lives of Irish citizens across all social classes when the majority of the wealth was held in the hands of the few.

Conclusion

The architectural quality, historical background and social significance of the Birr courthouse make it a building of regional if not national importance. Notwithstanding some later interventions, the original form remains largely intact together with the well-preserved courtroom interior; making the building an excellent example of an early nineteenth century provincial Irish courthouse. While the bulding fabric is relatively well preserved, it is in a very poor state of repair and is currently under threat particularly if steps are not taken to halt the decline of the building caused by a decade of neglect.

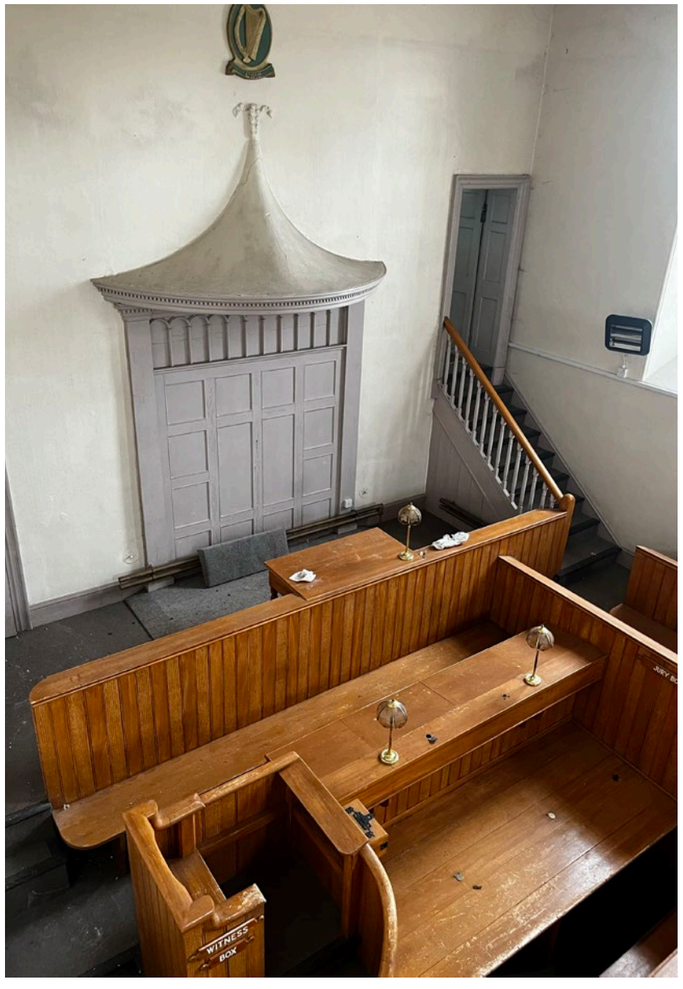

Figure 13 - View of the judge's dias and desk

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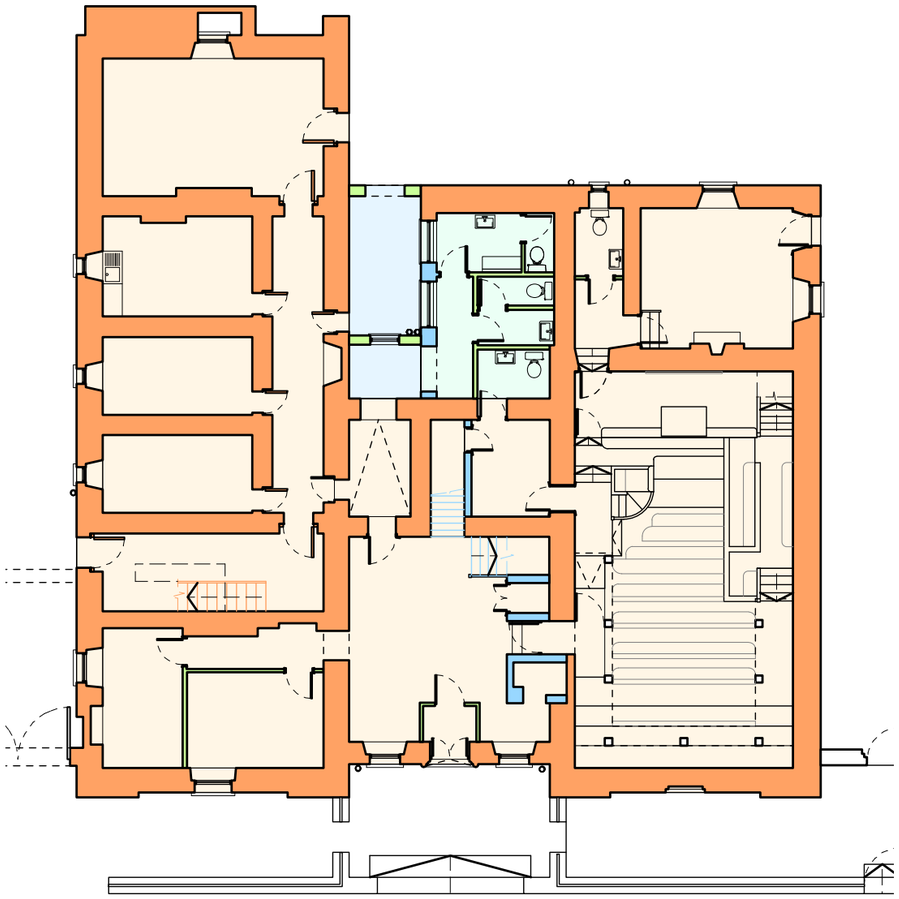
LEGEND

Building Fabric Layers

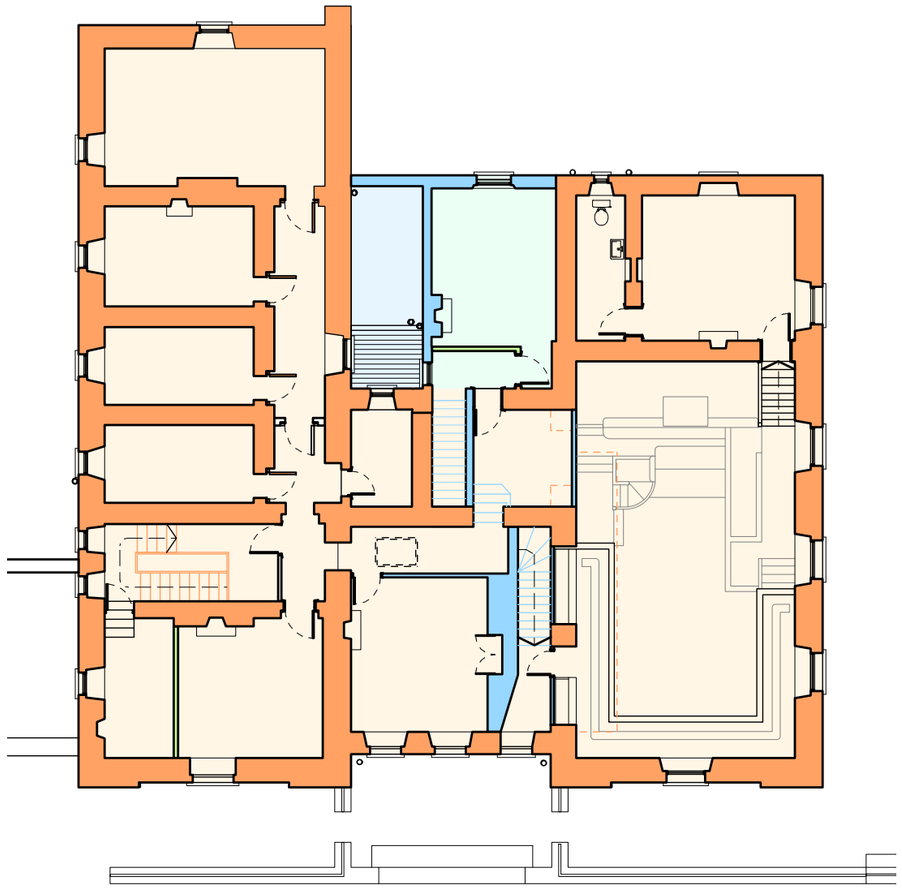
Early 19th Century (c.1810)

Later 19th Century Interventions
(or possible modifications
made after construction)

20th Century Interventions



GROUND FLOOR



FIRST FLOOR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4.0 Description & Condition of the Building & Site

Roofs

The building consists of two long ranges, joined by a central block with a later rear extension constructed in brick. A small single storey lean-to shed has been built beside the rear extension. The two-storey building has four separate simple pitched roofs, reflecting the floor plan below, with hips to the centre roof and rear extension, and hips to the west ends of the north and south range roofs. The roofs are separated by lead valleys, with the majority of rainwater discharging to the back of the building. A lead gutter behind the front parapet on the central block, discharges to two original downpipes.

All four roof areas were inspected externally from a MEWP in June 2021, and internally through a limited number of opening in the ceilings. A programme of roof repairs was carried out in the summer and autumn of 2021, focusing on the re-roofing of the south range and the renewal of the lead valleys throughout.

Over the courtroom, the north range roof was fully replaced at some point in the past, with new creosoted timbers visible above the suspended ceiling. This roof is covered with a Tegral, mineral fibre, artificial slates fixed to timber battens on a roofing membrane. Failure in roof timbers was evident on the west end of this roof, at the junction with the rear extension, where the lead valley above had failed and this valley was repaired in 2021.

Based on limited inspection from below, the roof to the central range also appears to have been replaced during the twentieth century with new timber members. The south range contains original timbers and is covered with Welsh slate, and this roof was fully re-slated in 2021 as part of the roofing works.

The roof valleys throughout were renewed in 2021, including the one behind the front parapet. Water was gathering here and failing to discharge adequately through two undersized chutes that drain the front parapet into hoppers on the front façade. A significant leak had occurred at the junction between the north range, central range, and the rear extension. Though much of the roof is now repaired, evidence of the historic leaks is still visible internally. A small lean-to extension between the rear brick extension and the south range is covered in cement tile and appears to be in fair condition. The asbestos survey from 2018 noted the presence of asbestos in this tile, and it is possible that some of the other fibre cement tiles, found elsewhere on the roofs might also contain asbestos.

There is a small modern skylight to the south pitch of central range, over the first floor corridor which appears to be in fair condition.

Chimneys

There are four existing chimneys stacks on the building, one on the north range, which serves the judge and jury rooms, one to the rear brick extension serving the small rooms at the back of the building, and two on the south range, which serve the east and west end rooms to the cell block. All three stacks to the north and south range are constructed in a clay, red brick with a dash render finish. The stack to the rear extension is narrower and taller and was most likely a later addition.

The two chimney stacks on the south range were repaired under the 2021 works, while the remaining chimney stacks have been rendered in cement, with the addition of cement flaunchings and modern pots. The west chimney to the south range was in a precarious condition, close to collapse but was rebuilt in 2021 and re-rendered in lime. It had been extended upwards with the addition of some additional brickwork, most likely undertaken to deal with a down-draught, which has now been removed. The rear extension chimney is also quite tall, and was most likely also extended, probably to address the same problem of down-draughts.

Figure 14 - Renewed rainwater goods to rear of building (completed in 2021)

Figure 15 - Leadwork valleys repaired and fully renewed in 2021

Rainwater Goods

The rainwater goods to the building had been replaced, badly repaired, or were clogged with debris or plant growth during the initial 2021 survey. The majority of the roofs rainwater goods had been replaced with aluminium gutters and downpipes and uPVC soil vent pipes – these were replaced with cast iron rainwater goods in 2021.

The original cast iron hoppers and downpipes on the front façade were repaired and retained, with replacement cast iron elements as necessary. A previous leak behind one of these downpipes resulted in severe damp and mould growth inside the building behind this leak. Though no longer leaking, the evidence of this historic leak is still visible internally. It is notable that there was no downpipe along the north façade of the building; a lengthy gutter run without any break or point of discharge. A new pipe was introduced in 2021 to take some of the rainwater from this long roof.

The extent of rainwater goods and number of downpipes will be assessed further in the upcoming works.

Figure 16 - Rectified photographic view of the rear facade of Birr Courthouse

External Walls

There are two pedimented gable ends to the front facade linked by a three bay screen wall, all of which are crenellated. The two bay-ends correspond to the courtroom volume and the cell block, each with a large blind round-headed niche. A limestone string course sits just below the castellated parapet that runs across the entire façade, while a second lower stringcourse further defines the bay ends, located at the springing point of the round headed blind niches.

There were originally two blind windows to the ground floor of each projecting bay, as shown on Cooke's 1826 elevation, but a window has been added to the south range room, to allow for more natural daylight into this room. A later opening is also evident beside this window, which has since been infilled.

The main walls appear to consist of load-bearing masonry walls with thick cement rich, painted pebbledash render on the front (west) and north elevations. In contrast the render finish to the south and east elevations is a softer lime coating that has come away from the facades in a number of locations.

The application of the thick unsightly cement based pebbledash render is damaging, and can disfigure and hasten the decay of historic masonry behind, as the underlying stone or brick is softer than the render. A common problem with hard cement coatings is that over time sections of render may crack or detach from the skin of the building, which will result in the trapping of water behind. This will cause the masonry to decay or become water-logged. Portland cement became particularly popular after the Second World War, often replacing the softer lime renders that were used originally.

Older layers of render are evident on the front facade and should be analysed to determine the original mix and colour of the render, a yellow sand is certainly visible within the mix. The condition of these coatings, both historic and more recent, is poor in certain locations, particularly where there are failing rainwater goods. This is due to water getting trapped within the masonry walls and is particularly evident on the gable wall to the south east corner of the courtroom where the wall is considerably saturated.

Much of the rubble masonry is exposed along the south range and to the rear areas of the building. The north façade, the courthouse, is fully rendered and painted. The original window openings remain fully intact, along the front, south and north facades.

Figure 18 - Exposed brickwork beneath the cement render on the front facade

Figure 17 - Tooled eaves stone to roof

External Doors & Windows

There is one main set of double entrance doors to the central entrance lobby on the front façade. These panelled doors were repaired and repainted in 2021, along with the windows to the front façade. The doors are a modern insertion as are the frame and fan-light above, which differ from the doors shown in Cooke's front elevation. A short flight of steps leads up to the front door though there is ramped access from the side.

There are a number of other exit doors, around the perimeter of the building which vary in age and style. The exit door from the judge's chambers has been boarded up from the outside, for security purposes, but the original six panel door and architrave is evident internally. This is in contrast to the heavy timber boarded exit door to the rear of the south range or cell block, which provided access to the rear yard. Some timber repairs will be necessary and a regular painting and maintenance routine is essential to ensure all external joinery is kept in a reasonable state of repair.

There is an ad hoc collection of windows from different periods across all four facades. Three original timber sashes with an elegant, lambs tongue profile remain on the front of the building, and these have been repaired. Later replacement windows with an ovolo profile have been installed elsewhere, and the large spoked windows in the courtroom have been replaced with poorly detailed single glazed modern replicas. Secondary acrylic screens have been installed to the internal side of these windows as a measure to prevent heat loss. Tooled limestone sills are still in place throughout.

Smaller window openings to the cells contain rusted iron bars, which are causing damage to the stonework. The condition of the timber framing behind is also quite poor and these windows should be repaired. A number of the windows to the rear façade are boarded up likely due to the on-going problems with leaking and security.

Figure 21 - North facade windows

Figure 20 - Front facade entrance door and surrounding windows (repaired 2021)

Figure 19 - Cell window with original bars

Figure 23 - Underside of roof prior to works in 2021

Roof Space

There is a roof space running the length of the north and south ranges; although this was not accessible during our site visits, some features could be made out through openings in the ceilings. The roof structure to the north range is a simple A-frame structure of collared rafters, of recent construction. Cement repairs are also visible to the wall tops and there appears to be a new wall plate. A loosely fitting, insulation blanket has been placed along the roof joists.

The roof over the central bay also appears to contain relatively new timbers, although it was only possible to inspect this roof space from one location from the stair landing below it. Most of the south range roof could not be inspected due to the presence of brick vaulting below.

Ceilings

A modern suspended ceiling dating from around 1990 has been installed in the courtroom at a lower level than the original plaster ceiling, which has been lost. The original plaster ceiling rose has been retained and relocated to sit on this suspended ceiling. Recent suspended ceilings are also in place in the jury and judges rooms, which also appear to have lost their original plaster ceilings. These unsightly suspended ceilings detract from the architectural quality of the spaces, in particular the courtroom, where they sit too close to the window openings.

The main entrance hall retains its plaster cornice and ceiling, as do the rooms to the rear, although the latter is badly damaged on the first floor due to water ingress. Laths are exposed in this first floor room and the whole ceiling will require full repair once the leaking valleys above have been relined.

The ceilings to the cells on the ground and first floor of the cell block are plastered brick vaults and appear to be in good structural condition. These should be fully inspected from above when roof repairs are carried out to the south range roof.

Figure 22 - View of modern suspended ceiling in the courtroom with ceiling rose

Figure 24 - Modern roof and ceiling above the courtroom

Figure 25 - Water ingress causing damage to the ceilings and walls

Figure 26 - View of the damaged plaster at gallery level of the courtroom

Walls and Plaster

The internal wall finishes in most cases consist of the original painted plaster walls applied directly onto the underlying masonry walls, albeit much affected by water ingress and mould growth in certain locations, such as in the entrance lobby and courtroom. These are areas of severe damage and organic growth is clearly evident. The remaining plasterwork throughout the building appears to be in a reasonable state of repair but further opening up will be necessary to identify areas of modern re-plastering that may have to be reversed.

Floor Finishes

The terrazzo floor in the entrance lobby, appears to have been raised by at least two inches, as evidenced by the bottom step of the timber stairs. This flooring may be lifted and the existing level below reinstated if it serves for a better accessible entrance to the building. There is a raised boarded floor with carpet cover throughout the courtroom, and the eleven different levels throughout the courtroom vary by over a metre between the judges platform, the jury stand and raked bench seating. The floor to the gallery in the courtroom is also covered carpeted.

The original stone flags are still in place throughout the cell block and are in need of localised repair, and cleaning. They are likely bedded on a lime base, but this should be investigated further. The remaining rooms throughout the central range and rear extension contain timber floors with carpet.

Stone Stairs

There is one cantilevered stone stair in the building, in the south range or cell block. It is in fair condition, aside from a badly rusted handrail. There is some evidence of repair to the underside of the landing in the stair, and it has been plastered in a number of locations. See structural assessment for further information.

Figure 31 - Plastered vaulted cells

Figure 30 - Internal view of the front room at first floor level

Figure 29 - Historic cantilevered stone stair with original balustrade

Figure 27 - View of the corridor in the cell block with original stone flags

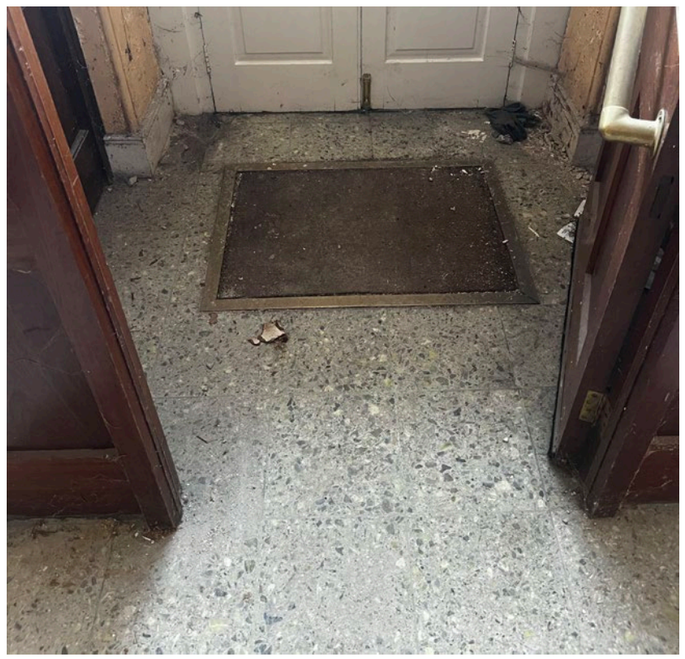

Figure 28 - Modern raised floor in the entrance hall

Internal Joinery

Of particular note in the building is the old courtroom interior, which retains its original plan, and form. The room retains the judge's platform, dias and canopy, timber gallery structure, timber panelling and timber seating. There are striking similarity to timber joinery retained in the Daingean courthouse, in particular the arcade effect to the gallery, and the square shaped Tuscan columns supporting it. On the ground floor level some of the original gates are still present together with the original stairs to the jury box, and the witness stand. There is evidence of a third arch on the south wall of the courtroom which has been infilled with plasterboard. This might relate to a different stair and gallery arrangement as shown on the 1879 plan of the courtroom.

Leading to the courtroom and the rear extension from the central entrance hall are two timber stairs. Both appear to be nineteenth century with pine turned balustrades and the stair to the gallery has a substantial newel post. This staircase is partially supported by the walls of the storage cupboards which stand either side of the entry route to the courtroom. Both timber stairs remain in reasonable condition.

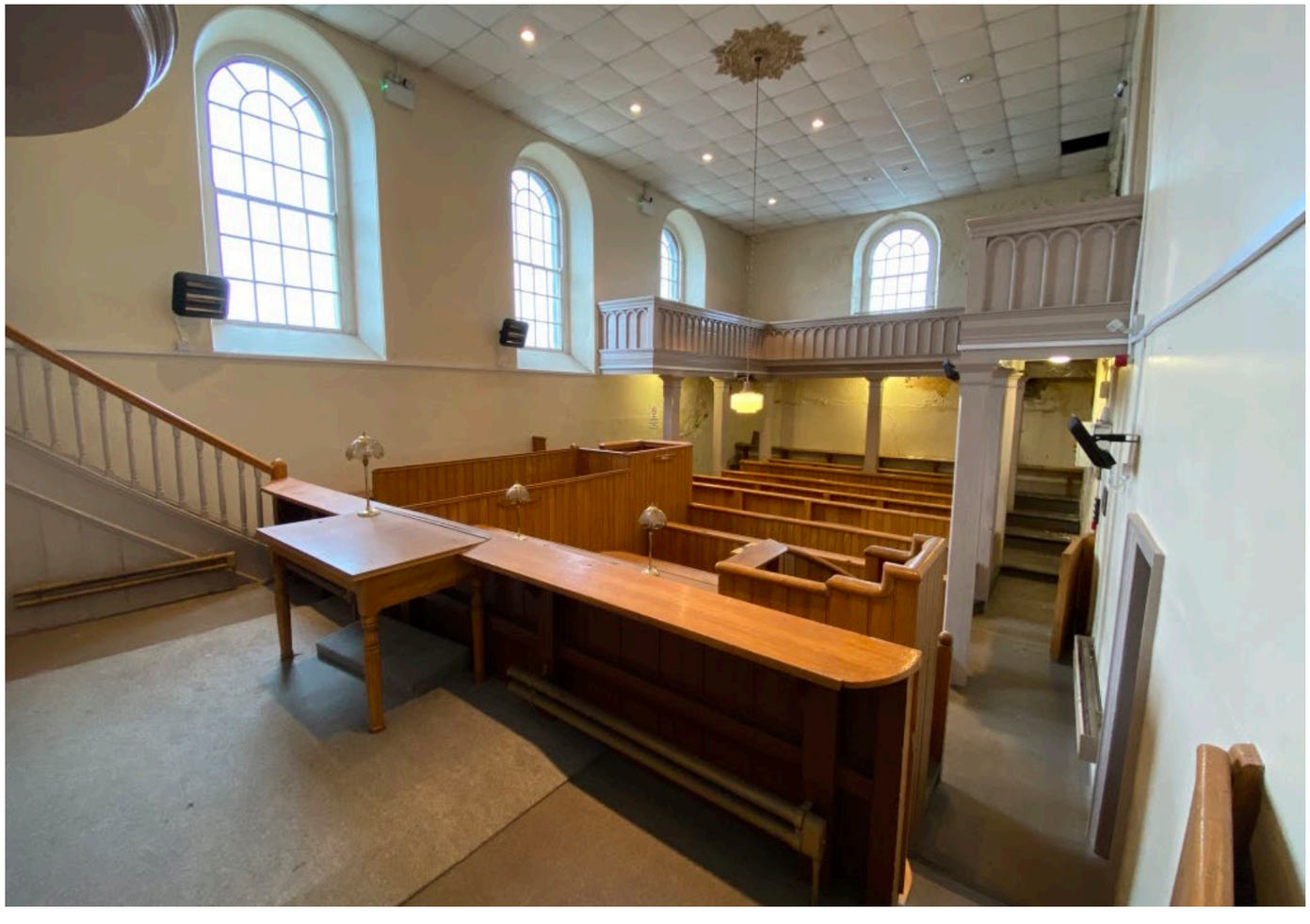

Figure 32 - View of the courtroom interior from the judge's platform

Figure 33 - Damage to plaster due to ongoing water ingress

Decorations

There are areas throughout the courthouse complex where paint can be seen to be lifting from the walls and ceilings. This is caused by moisture, and water ingress. This condition will be improved by the repair of roofs and rainwater goods, the removal of the suspended ceilings to the courtroom areas and reintroduction of ventilation to the building through the external windows and circular ceiling openings.

Fireplaces

There are at least two original fireplaces, both with plain stone surrounds and shelves, and inset cast iron grates, remaining in the building. In the judge's room behind the courtroom and in the east end of the south there are more decorative fireplaces, also in stone with decorative console brackets. These are both painted and hard to date, they may be historic or good quality replica. Fireplaces have been removed from the ground floor rooms in the west end of the cell block, but these were likely very rudimentary in nature. It was not possible to inspect the fire place in the first floor room to the west end of the cell block due to the ceiling collapse in this room.

A later Edwardian style fireplace is in place in the first floor room in the brick extension to the rear, with glazed brick reveals and a simple low grate. All of the fireplaces have been painted over the years, and these paint schemes should be removed and the fireplaces and hearths retained and refurbished as important parts of the building fabric from a time when the space heating was created by open fires.

Figure 37 - Cast Edwardian fireplace in rear extension

Figure 34 - Painted Victorian fireplace in first floor room in the central range

Heating & Mechanical

The heating system consists of wall mounted storage heaters located in a number of rooms around the building. These are expensive to run and were likely installed in the latter half of the twentieth century. Prior to this the only heating to the building would have been the fireplaces, and a piped heating system within the courtroom. This latter system appears to be fully redundant and currently there is no boiler attached to this system. If it was installed in the nineteenth century, which it appears to be, the boiler might have been located in the lower level below the courtroom – as indicated on the survey section of the courtroom. A number of heavy duty surface mounted radiant heating units have been added around the perimeter of the courtroom at high level, along the gallery and walls. These were probably inserted either to supplement the existing heating or when the boiler became redundant and was removed.

There are a number of wall vents in the external walls which would allow for passive air ventilation – there is no mechanical ventilation within the building.

The long-term solution to heating problems is the installation of a new condensing, high efficiently boiler and central heating to meet modern environmental standards in lieu of expensive electrical and mobile gas heaters. This could be powered by air source heat pumps located to the rear of the building to create a more environmentally friendly system that would be cheaper to run.

Figure 36 - Electrical box in ground floor entrance hall

Figure 35 - Heating in courtroom

Lighting and Power

The electrical installation throughout appears to date from a range of periods and conditions. The main ESB boxes and fuse boards are located within the central entrance hall, and should be fully replaced as there is considerable water ingress behind the boxes. There are a number of poorly located conduit runs throughout the entrance lobby although fortunately, these have been placed away from the historic cornice.

The lighting to the old courtroom includes modern fluorescent spot lights set within the suspended ceiling and one central modern globe pendant fitting hanging from the historic ceiling rose. There is a matching pendant in the entrance hall. There are three modern desk lamps, one at the judges desk, and two on the barristers bench.

There are surface mounted florescent lighting in place throughout the remaining rooms and to the corridors in the cell block, with wall mounted fixtures within each cell.

One bakelite switch remains to the top of stair to the rear extension and a bank of six bakelite switches remain on the wall inside the courtroom.

It would appear that the OPW installed full security and fire alarm systems in recent years, though these have not been fully tested or assessed from a building regulations standpoint. The security system is operational and there are security contacts on a number of ground floor windows and doors.

It is unlikely that the current electrical installation complies with current safety standards and we would highly recommend a full survey of the electrical and mechanical services within the building, all of which requires substantial upgrading.

Figure 38 - Courtroom interior

Figure 40 - Entrance to judge's laneway

Figure 39 - Judges laneway to north side of courthouse

Curtilage

To the rear, the site is contained within the confines of a stonewall, approx. 5.5m in height, which remains intact. This once contained an exercise yard for prisoners, as indicated on the earlier historic maps. There are remnants of an old wall running from the north west corner of the south range to the west wall of the yard, indicating the original smaller yard area.

The main access route to the enclosed rear courtyard runs along the south side of the building, under a square headed stone opening, supported on steel lintels with stone crenellations above. This opening has been modified somewhat crudely, probably to facilitate access for large vehicles. The castellated top is mirrored on the north side of the building, where it defines the entrance to the judges laneway that provided a dedicated route to the judge's chambers. An original arched opening is still in place within this masonry wall. A second square-headed opening sits further west along the south lane, precariously supported on a heavily rusted steel beam. This may relate to the small extension on the south side of the building shown on the first edition ordnance survey.

The primary entrance route to the building is via three shallow stone steps leading up to the front entrance doors. Low level stone walls separate the public pavement from the shallow forecourt areas in front of each projecting bay. A simple painted iron railing is fixed on the cap stone of the walls. The concrete surfaces in these front areas are unsightly and will require upgrading or replacement.

Figure 42 - Rear Yard

Figure 41 - Rectified photographic view of the south facade

Figure 43 - Rectified photograph of the north facade


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5.0 Planning and Legislation

The Offaly County Development Plan (2021-2027) cites Birr Courthouse is a protected structure (RPS 49-252). It is listed as being of regional significance on the National Inventory of Architectural Heritage (Reg no 14819055), and described as being an 'austere building' with a *'crenelated parapet'* creating an 'imposing structure'. At the time of the NIAH survey it was still in use and it was noted as being of 'social importance to the town'.

The Birr Local Area Plan (2023-2029) notes that *"Birr serves as an important employment centre for the county, and in particular has a strong ICT, Financial, Real Estate, Professional, Administration and support service activities sector representing 37.7% of Birr's Employment."* The Birr Courthouse is noted as an *'opportunity site'* on the Birr Local Area plan zoning map and is zoned for 'community services/facilities'.

The strategic vision outlined in the plan includes the following aims:

- Strategic Aim 1: Economic Development - To successfully fulfil Birr's role as a self-sustaining growth town by embracing the transition to a low carbon and climate resilient model of development while seeking to utilise and invest in the town's existing economic, social and environmental assets to generate sustainable economic development and job creation, thereby enhancing its status as the main business, service, social, cultural, tourism and recreational hub for everyone in south Offaly and ensuring it is an attractive place to live, work and visit.

- Strategic Aim 2: Town Centre and Regeneration - To sensitively and sustainably enhance the historic town centre through the provision of healthy place-making. To facilitate a competitive and healthy retail environment and to support the future vitality, diversity and viability of Birr town centre and Crinkill village. Reinforce Birr town centre as the heart of the town, by avoiding undesirable and inefficient sprawl, achieving critical mass and consolidating new development within the built-up footprint of the town, through targeting a significant proportion of future development on infill/brownfield/under-utilised sites, and extending out sequentially subject to available infrastructure. These aims will improve the attractiveness and functionality of Birr Town as a place in which to live, work and visit while also functioning as the business, service, social, cultural and recreational hub for the local community.

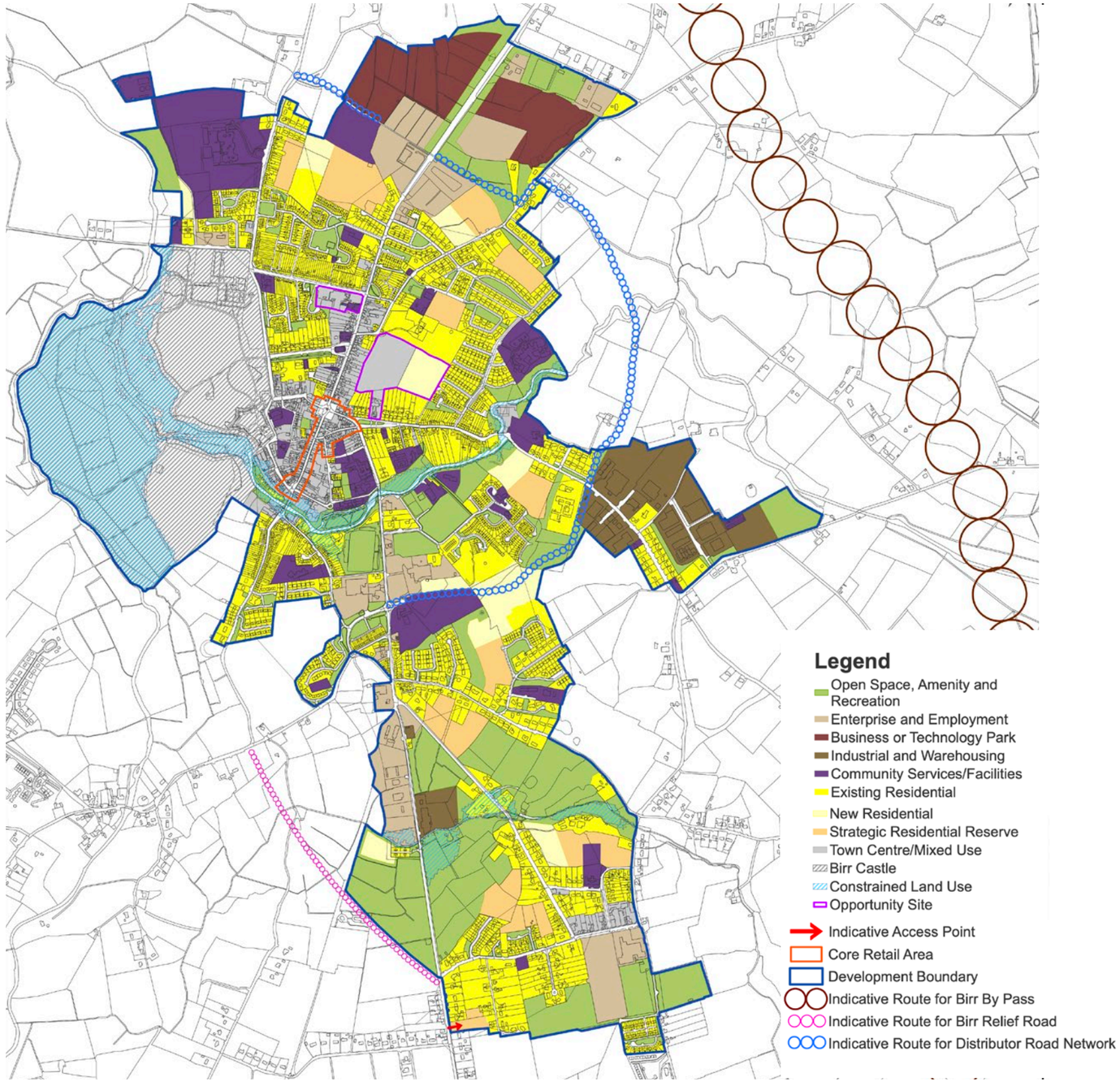

Figure 44 - Birr Local Area Plan Zoning Map

- Strategic Aim 3: Built Heritage - To protect, conserve and manage Birr's buildings, areas, structures, sites and features of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, by promoting the understanding, enhancement and appropriate development of these assets in order to instigate a heritage-led regeneration of the town.

- Strategic Aim 6: Community - Promote Birr as a town where people can live and work, with access to a range of community facilities and events that are vital for social inclusion and quality of life for all.

- Strategic Aim 7: Climate Action - Enhance climate adaptation and mitigation, and accelerate a transition to a low carbon, climate resilient and environmentally sustainable economy in Birr.

- Strategic Aim 10: Land Use Zoning Objectives - To adhere to the land use zoning objectives contained in this Plan in the interests of orderly development and eliminating potential conflicts between incompatible land uses.

- Strategic Aim 11: Implementing and Monitoring - To implement in conjunction with key stakeholders, the objectives of this Local Area Plan, with a particular focus on the key strategic objectives, and to monitor same.

It is noted in Chapter 2 - Economic Development Strategy that the aim is 'to promote a strong, resilient, competitive, sustainable, low carbon, digital, inclusive and diverse economic base supported by enterprise, innovation and skills to enable people to live, create, study, visit, invest and work in Birr. Also to support the capitalisation of the high quality tourism attractions in Birr Town.'

Under enterprise, Birr Courthouse is noted as having 'significant potential to be refurbished and repurposed as a multi-purpose community space, a digital / connected hub, as well as for arts and culture purposes. There are also strategic aims to develop remote working, co-working and business workspaces, along with the development of arts and cultural activities.

Within chapter 3 there is a strategic aim to 'sensitively and sustainably enhance the historic town centre through the provision of healthy place-making.' And this will include 'the protection and enhancement of the historical core of Birr town ... facilitated by all available means including environmental improvements, the promotion and facilitation of the appropriate reuse/renewal of derelict, vacant and underutilised buildings in the town centre."

Birr Courthouse is noted as a Town Enhancement project, and adjacent to it is an 'opportunity site' which is the mart. The Birr Local Area Plan has provided a strong basis for the brief for Birr Courthouse, to ensure that this building comes back into use as a sustainable and community serving space which will enhance the town centre, while protecting and conserving a significant heritage asset within the town.

The Offaly Development Plan 2021-2027 states 'that alterations or extensions to protected structures shall only be permitted if the proposals are in keeping with the character of the structure and preserve the architectural and historic features of the structure.' Birr is noted as a zone of archaeological potential within the Development Plan.

Built Heritage Policies within the Development Plan include:

BHP-01 It is Council policy to ensure the protection, sympathetic and sensitive modification, alteration, extension or reuse of protected structures or parts of protected structures, and the immediate surrounds included and proposed for inclusion in the Record of Protected Structures that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, together with the integrity of their character and setting.

Figure 45 - View of Birr Courthouse from the adjacent mart

Figure 46 - View of the gallery in the courtroom

The design team for the Birr Courthouse project is led by Grade 1 architects, Howley Hayes Cooney, who have brought together an experienced design team to deliver the proposals for this significant protected structure. A conservation masterplan was prepared in advance of this planning application which has established the cultural significance of the building.

BHP-04 It is Council policy to favourably consider the change of use of any structure included on the Record of Protected Structures provided such a change of use does not adversely impact on its intrinsic character and is in accordance with the proper planning and sustainable development of the area.

BHP-05 It is Council policy to actively encourage uses that are compatible with the character of protected structures.

Building up on the initial Birr 20:20 brief for the building, the design team has determined that the proposed use will not adversely impact on the intrinsic character of the protected structure and this is further described in the chapters 7 & 8 of this report.

BHP-08 It is Council policy to require an Architectural Heritage Assessment Report, as described in Appendix B of the Architectural Heritage Protection, Guidelines for Planning Authorities, Department of Culture, Heritage and the Gaeltacht (2013), to accompany all applications involving a protected structure.

A heritage impact assessment is included at the end of this report.

Taking all of these policies and strategic aims into account, the following chapters outline the conservation and development approach to the site, and the impact the proposals will have on the protected structure.

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6.0 Conservation Strategy

The building has been unoccupied for over ten years, and the lack of maintenance during this period has resulted in localised areas of significant damage, due to uncontrolled water ingress. Despite this, the structure is generally quite stable, no doubt due to its robust construction.

All conservation works considered within the proposals are guided by the principle of minimum intervention as set out in the Burra Charter, under the general aim of doing – as little as possible, but as much as is necessary. The general approach and objectives for Birr Courthouse can be summarised as follows:

- To provide effective maintenance of the building, including an on-going maintenance plan and strategy,
- To ensure implementation of the best conservation practice for the repair of its historic fabric, such as windows, plasterwork, internal joinery roofs etc,
- To record the existing buildings and site, with a record of past interventions ahead of any works
- To ensure that interpretation of the building is well-researched and accurate,
- To increase knowledge, awareness and understanding of the place (buildings and settings),
- To recognise the use of the place as a cultural and educational resource,
- To promote the site as an important heritage asset for the town of Birr

Protection of Built Heritage

Ensure the protection of the built heritage through its repair and preservation, and where possible, the improvement of its settings. Document and record all repair and intervention works, as part of the history of the buildings and site.

External Fabric

The external fabric of the building survives in a reasonable state of repair, though the cement rich dash is masking water ingress within the masonry walls in several locations. Removal of the cement coatings will be undertaken and the underlying masonry repaired and consolidated as required prior to the application of a lime render throughout. Repair mortars (lime based) and structural pins / bars will be the approach for the repair of the rubble masonry where required. Projecting string courses will also be repaired, with grafts if required, in a good matching stone, by experienced heritage masons. Samples of repair approaches will be provided on site for review by Offaly County Council prior to undertaking full repairs.

The roof is now in a reasonable condition following the 2021 works, though the north range roof and the inner roofs had only minimal works carried out to them at this time and are in need of further investigation and repair. The existing rainwater disposal system will also be upgraded and modified as required, to ensure it will continue to function adequately with the new infill extension to the rear. Repairs to the roof structure will include splice repairs to the rafter ends as required, and this is anticipated on the north range roof. The existing modern roof tiles will be fully stripped and replaced with a natural slate, with new battens and a breathable underlay. Suitable breathable insulation will also be incorporated into the roof or ceiling spaces. Traditional leadwork has been installed throughout to form the valleys and flashings to the roof and this will be augmented as required.

The windows to the front façade and north façade have been repaired in recent years though the north façade windows will require some work to ensure that the wood is still well protected. Along the south façade and rear façade the windows are in a poor state of repair. The approach here will be to repair the existing windows where possible and to install new timber sash and case windows where the windows are beyond repair. In both options the windows to the south and rear façade will be fitted with slim profile double glazing, which will improve the energy efficiency of the building while reinstating the historic fenestration patterns throughout the courthouse. If possible, the windows to the north façade, which are later replacements, will also be fitted with slim profile double glazing, to help retain heat within this large volume space.

Figure 47 - Salvaged slate on site from the 2021 works - reinstated on the roof

Works will be undertaken within the wider site to improve access to the protected structure, with ground resurfacing, while retaining and repairing significant historic features such as the cast iron railings and stone walls. The historic laneway contains two flat headed arches which require structural repair, and the existing rusting gates to this laneway will be replaced with a suitable, discreet metal gates. The north laneway, or judge's lane, is a pedestrian route, with an arcade wall and arched entrance. This route will be fully maintained and repaired where required.

The rear yard will be kept very much as it is today, with the inclusion of a new fire escape stair to the building and a large storage structure to the north wall. Existing masonry walls will be fully retained and repaired, with new weathered tops in the form of new capping or rough-racking, and all masonry walls on site will be repointed with a suitable lime mortar.

Internal Fabric

Internally the intention is to retain any remaining historic features throughout, such as the stone stairs and balustrade, original masonry cells, the majority of the original joinery and plasterwork. These elements will be carefully conserved under best conservation practice. A number of non-original elements will be removed, to facilitate the insertion of appropriate internal fittings and finishes. New joinery and glazing screens will be introduced where required for fire separation and these will be contemporary in nature. The timber joinery in the courtroom, including the judge's dias and desk, witness box and fixed seating will all be retained and repaired, with only one section removed to facilitate wheelchair access.

The historic cast iron fireplaces will be retained for decorative purposes, carefully cleaned, with new grates, where required, inserted to reinstate the original appearance of these fireplaces. Repair works to the internal walls will be carried out with lime plaster. There are few remaining lath and plaster ceilings within the building but where any are uncovered, they will be carefully repaired and reinstated. Vaulted masonry ceilings within the south range cells will be replastered as required. Historic skirting boards and door and window architraves where still in place in rooms will be retained and repaired, though modern doors have been installed for the most part throughout the building. Historic joinery elements will be retained and repaired by an experienced joiner, and paint analysis samples will be taken to determine the original paint schemes within the building. The cell doors will be retained are rehung on the wall outside each cell, as new sliding doors will be added to maximise the opening width of these narrow entrances. The limestone reveals and a stone lintels over the doors are partially visible below layers of paint. These will be cleaned and revealed within the proposed scheme.

The historic layout of the courthouse is still intact, with the main courtroom space in the north range supported by a number of ancillary rooms, including judges quarters and a suite of cells within the south range. The layout of the historic building will be retained, with only minimal intervention where required to improve circulation and movement through the building. These interventions have been carefully considered, to ensure that no significant parts of the building are affected. New openings in the external masonry walls are proposed to the rear (west) facade, to provide access and address escape requirements, while the prominent front (east), south and north façades will be kept fully intact.

Figure 48 - Front facade of the courthouse

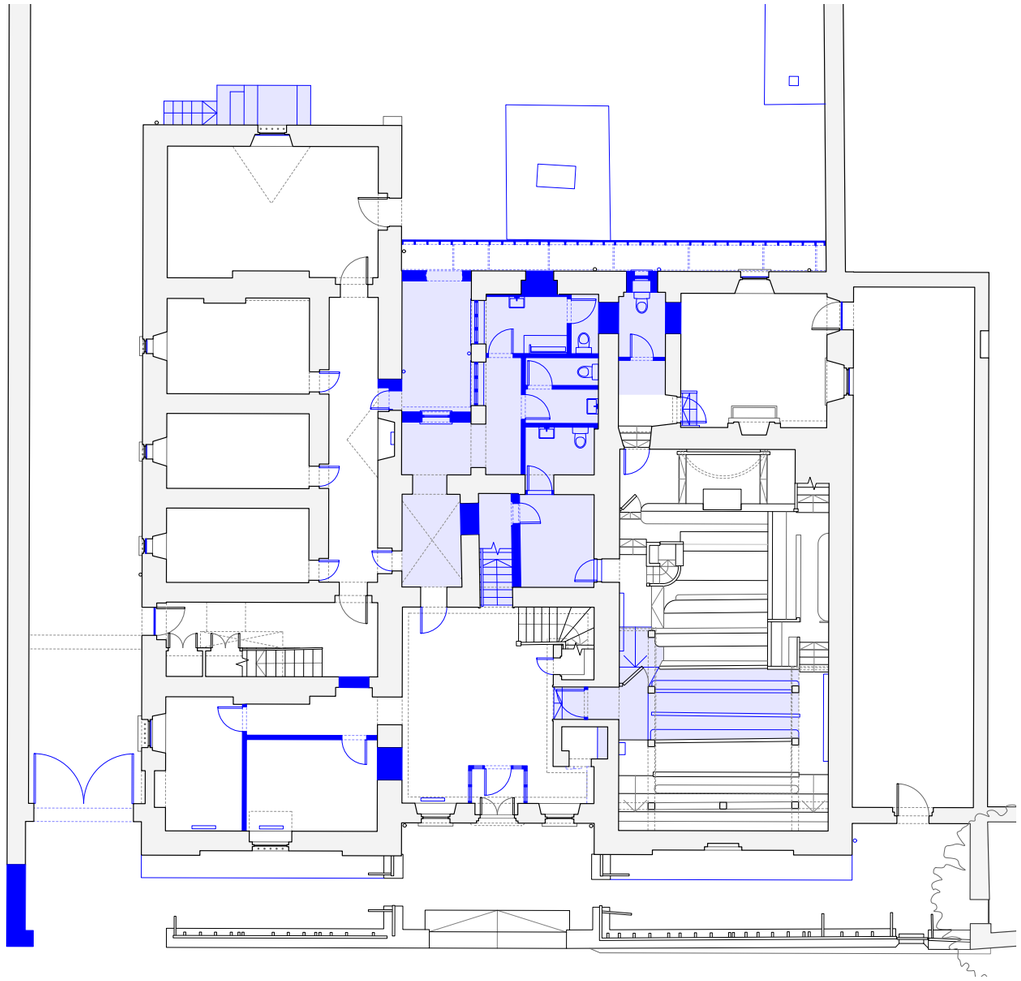

Figure 49 - Existing/Demolition Ground Floor Plan

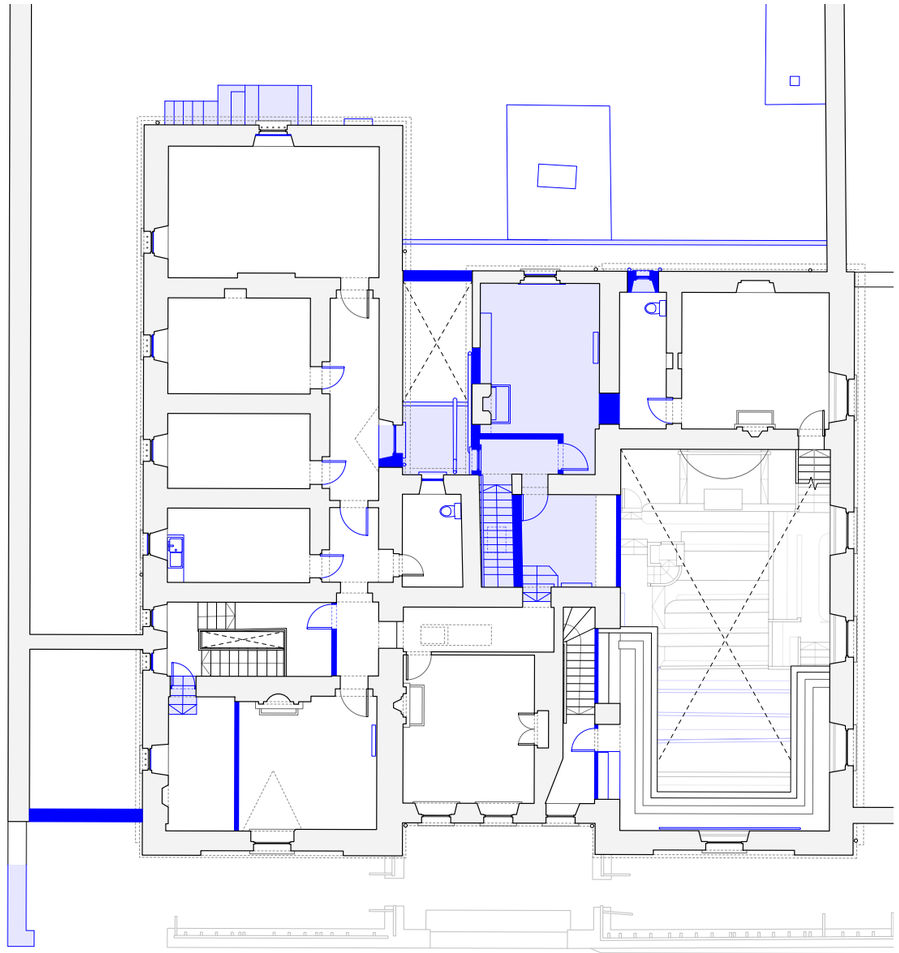

Figure 50 - Existing/Demolition First Floor Plan

7.0 Design Approach

Development of the Brief

Having taken ownership of the building in 2021, Offaly County Council were guided by the conservation masterplan prepared by Howley Hayes Cooney Architects to establish the parameters for the future development of the building and site. The initial scoping report, titled Birr Creative Court, which was prepared in June 2019 by Birr 20:20 established the potential use of the site as a *'creative space'*, *'to facilitate sustainable collaboration between local and visiting professional practitioners, and the wider community, in the pursuit of creative excellence'*. This has provided a good basis for an initial development brief.

The three key objectives of the Birr 20:20 brief were as follows:

1. Four broad categories to be catered for; Visual Arts, Performing Arts, Digital Arts and Curious Minds.

2. While the creative hub will be based in the Courthouse its support activities will range across a variety of local institutions and networks.

3. A purpose-built multifunctional space in which to box, dance, rehearse – constructed in the rear yard.

The third objective was explored within the conservation masterplan but does not form part of the planning application, as the creation of a new building to the rear of the site will require considerable economic investment.

Birr courthouse, like many protected structures, has wonderful potential for adaptive re-use, but also comes with limitations, in terms of the extent of alteration which can be accommodated. Finding the right balance between intervention or alteration and the retention of historic character and fabric is of the utmost importance, and it is imperative that the new use compliments and enhances the building, rather than detracting from its impressive historic character.

For historic buildings previously in civic use, it also important to try to find a new public use, or at least to facilitate public access. This will ensure that buildings of this nature can remain rooted in the community of the town. The use proposed by the Birr 20:20 group is highly appropriate, as it seeks to use individual rooms and spaces as places for local residents, or those from the wider community, to

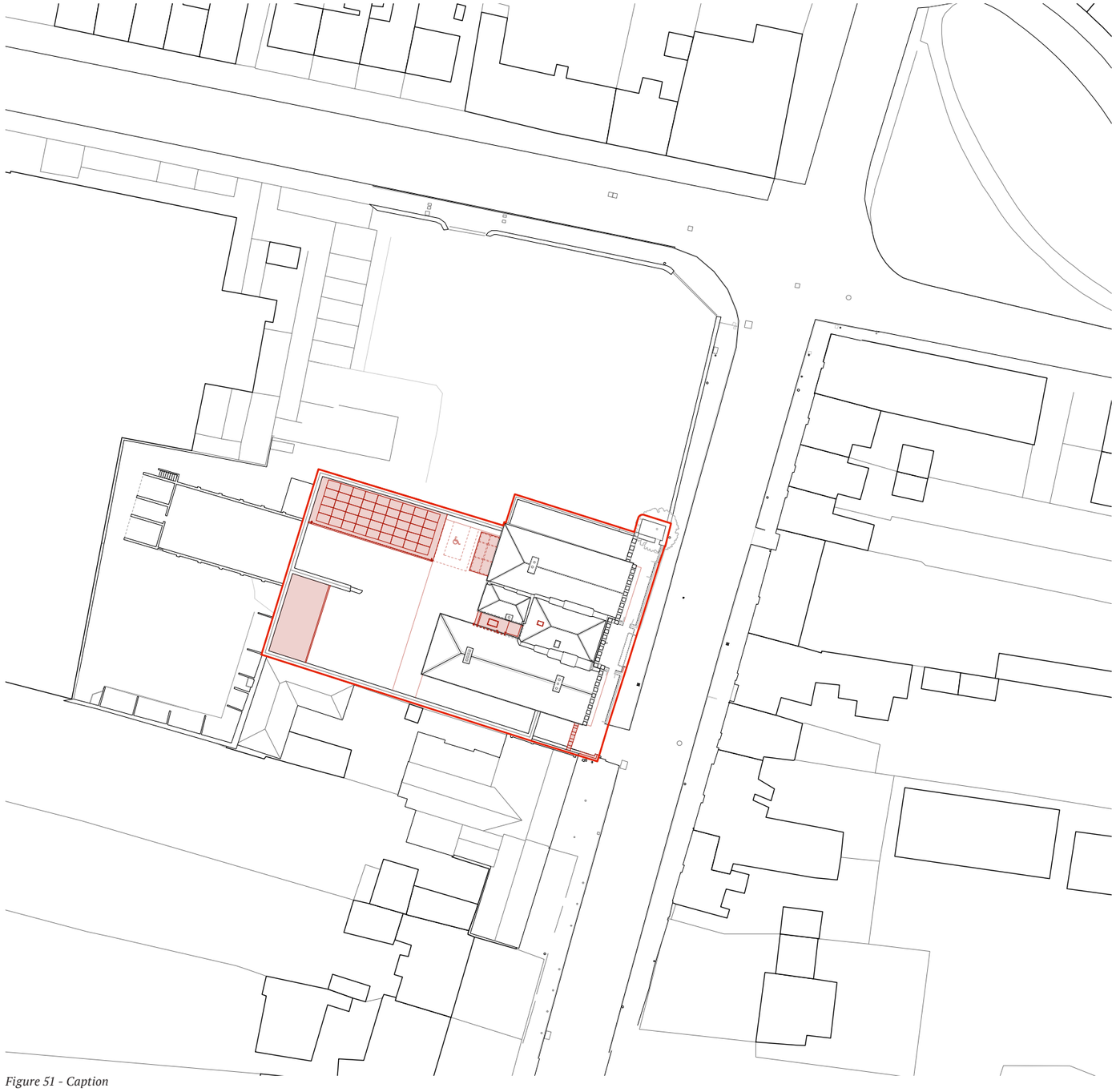

Figure 51 - Caption

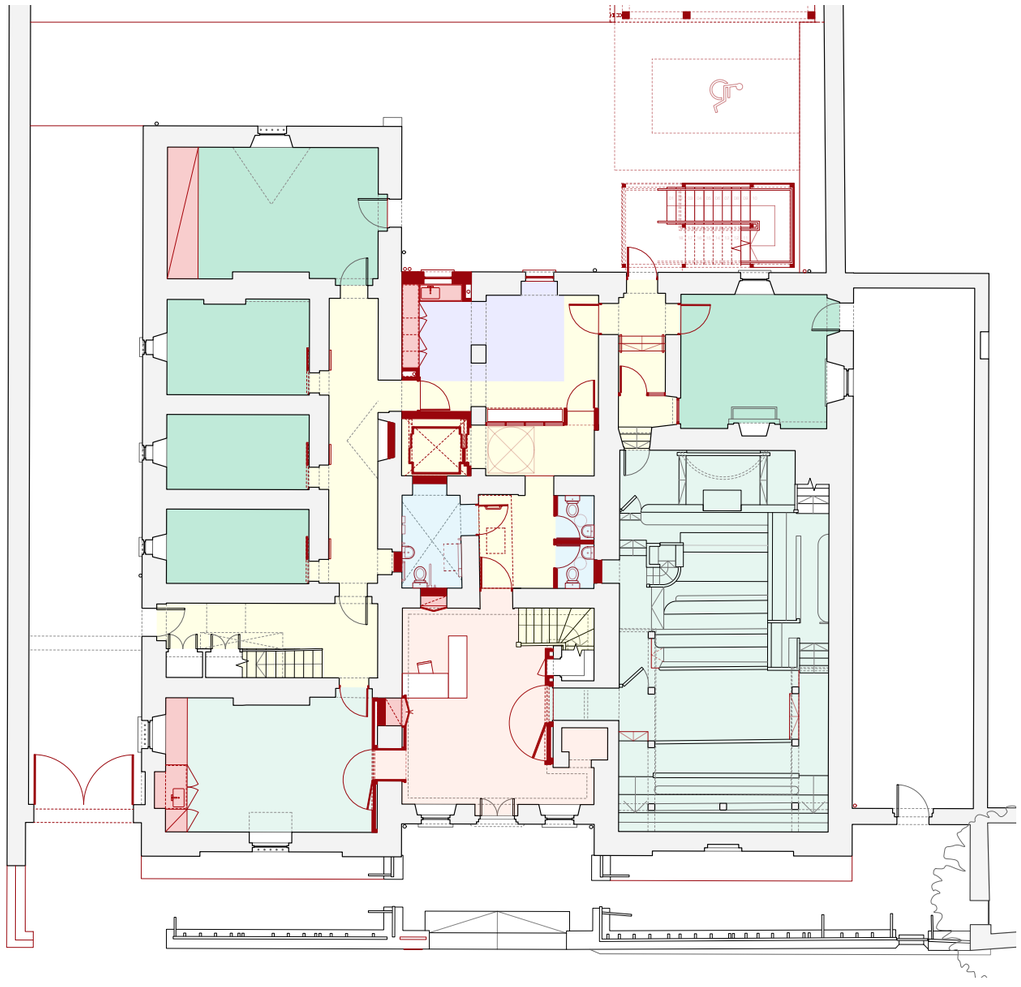

Figure 52 - Proposed Ground Floor Plan

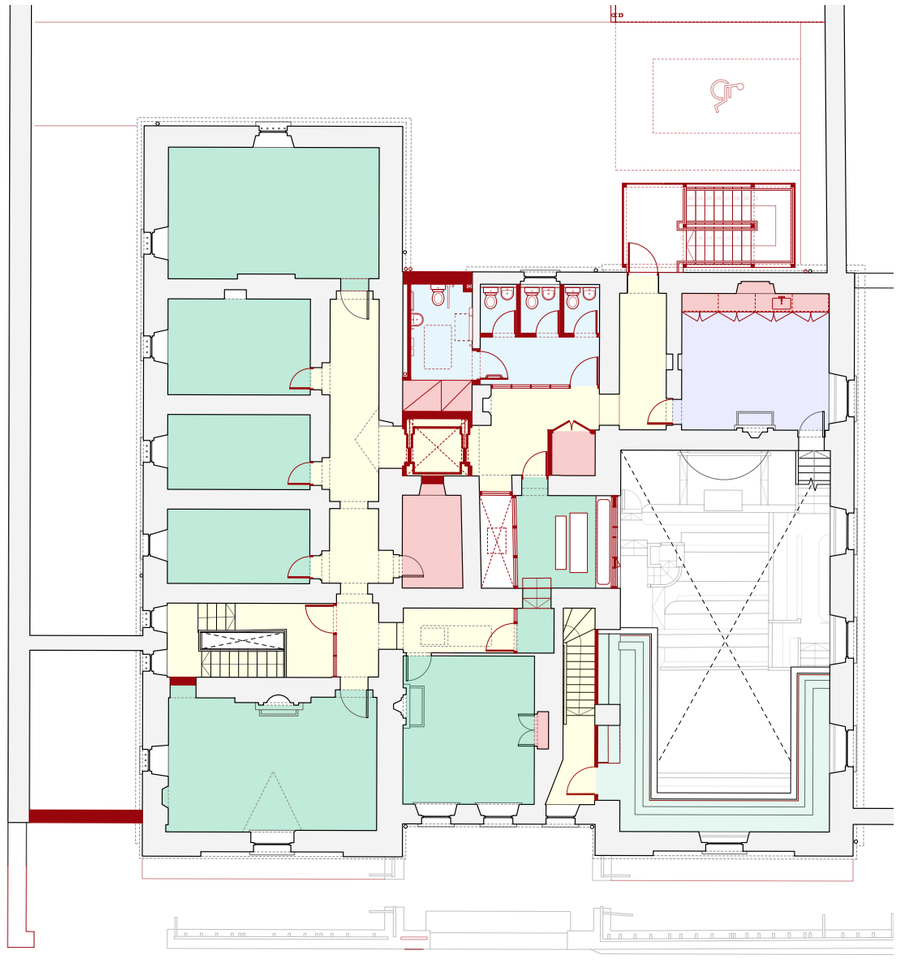

Figure 53 - Proposed First Floor Plan

- Entrance / Reception / Break-out
- Multi-function (Public Spaces)
- Multi-function (Studio / Meeting / Office / etc.)
- Circulation
- Canteen / Kitchenette
- WCs
- Store / Services

assemble, work, collaborate and create. It is also important that a degree of flexibility is considered, as the initial proposed use may evolve over time, so this suite of rooms and spaces should be able to accommodate other uses in the future.

At Birr Courthouse it is important that the new use avails of the many separate rooms and spaces, utilising these as independent rooms or hubs. Due to its robust construction it would not be easy or appropriate to open up areas of the building, creating large openings in thick masonry walls, or try to create substantial new connections between rooms. Instead it is important to work with the structural arrangements as they exist, whilst identifying where subtle and appropriate interventions could be accommodated.

The most historically significant elements within the building such as the original courtroom, vaulted cells, stone stair and front entrance lobby will be retained with minimal intervention and alteration. To the rear of the building within the centre bay, various alterations including the insertion of WCs have previously been undertaken. This area of the building has the most potential for alteration, and is a suitable area to accommodate the 'heavy-lifting' or support service spaces, such as WCs, a lift and kitchenette.

The adaptive reuse and repurposing of Birr Courthouse will facilitate the implementation of the following:

- A suite of flexible use spaces for creative groups, local community and the Council
- A refurbished courtroom for events such as presentations, lectures and small performances
- An accessible route into the building
- WC facilities
- Kitchenette facilities
- A lift to provide universal access to the first floor
- Support and storage facilities including in the rear yard
- A new escape stair to the rear for fire safety

HHC, together with the wider design team has developed design proposals for the existing courthouse which advocates a 'light-touch' approach to the conservation of the interior, while addressing fire safety, accessibility and servicing requirements throughout.

Circulation

Courthouses were originally designed to separate and segregate their occupants, keeping the public to the front entrance area and courtroom, prisoners within the cell block, and the judge and clerks within their own private chambers. As a result, the circulation routes throughout the building are convoluted, and were not intended to allow for easy movement throughout. Unlocking the circulation is an important aspect of the proposals as this building should be easy to navigate and move through. The incorporation of a lift will allow for a second means of access to the first floor of the building, and the new external fire escape stair will provide a quicker route to the rear yard from the first floor. Internally the removal of one of the timber stairs will ease circulation throughout the ground floor, providing direct access from the front entrance to the rear of the building.

A new connection through to the existing stone stair from the entrance lobby will allow visitors to easily reach the first floor upon arrival at the courthouse.

Internal Arrangements

The courtroom was the most important space within the building, providing a place of spectacle, drama and public interest. The new interventions will complement this historic use, and the space will be used to host lectures, presentations and small dramatic performances. The original historic joinery is well preserved and partially supported by the structural columns of the gallery, which connect the two levels.

As one of the few remaining intact courtrooms in Ireland from this period it is important that this room be retained and preserved with only minor intervention or alteration where absolutely required. Improvements to the comfort of the existing seating will be achieved to make the space viable as a flexible working forum using laptops or more traditional sketch pads and notebooks. Introducing cushioned

Figure 54 - Proposed courtroom section

seat pads, good power and data connections, and clip on work surfaces, will allow people to use the space in comfort for extended periods. The raked seating, and the elevated height of the judges platform will make the space ideal for presentation purposes for lectures, films or debates. A section of the seating will be removed to facilitate wheelchair access.
Use of the individual prison cells - which contain plastered brick vaulted ceilings and are more spacious than one might imagine - as artists studio spaces will work well, as there are other examples of successful conversions of historic cell blocks for similar use. Other rooms throughout the ground and first floor could perform a variety of flexible uses. A small coffee dock for visitors will be provided in the ground floor room adjacent to the entrance lobby, to cater for events in the main courtroom.

Where interventions are required in the form of new doors within new openings, the insertion of glazed or timber screens and new fitted furniture, these will be contemporary in nature to distinguish them from the historic fabric, yet sympathetic to the original building. The use of high quality sustainable materials such as timber will be considered for these elements, designed in such a way that they could be easily removed in the future. Within the main entrance a new door is required to the courtroom, which cannot be accommodated within the entry corridor to the courtroom, due to Part M requirements. This new door will be positioned within a contemporary timber screen to the front of the entrance corridor, legible as a new insertion, and held open the majority of the time. It will read as a panelled element, and will be designed to complement the new reception desk within the entrance hall.

With the removal of the old timber stair a small yet effective double height void will be created within the centre of the building, which will bring more light into these gloomy spaces. Remnants of an old arched opening in the south courtroom wall will be opened up and a new timber glazed screen inserted, to allow for greater visual connection between the adjoining spaces, and to bring natural light into the inboard multipurpose room.

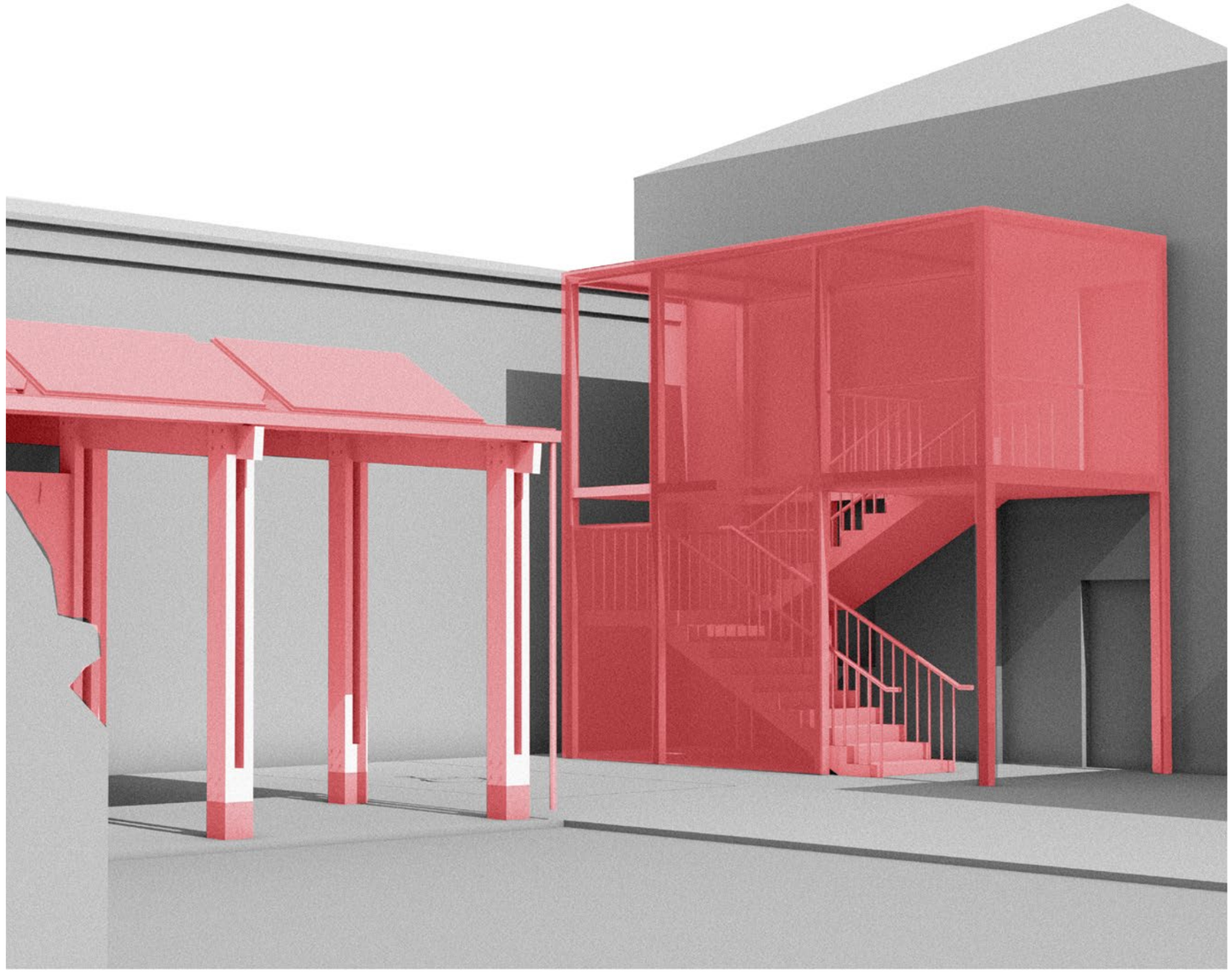

Figure 55 - Proposed external escape stair and new store

New Development

A small infill extension is proposed to the rear of the building behind an existing double height wall, sandwiched between the south range and rear mid section of the building. This will house kitchenette facilities at both ground and first floor level. A new flat roof above will sit below the historic eaves level the adjoining roofs. This intervention will require the removal of a modern single storey lean to extension which is currently in this location, and of no historic value.

To the rear of the courthouse a new escape stair of steel construction will sit lightly against the west gable of the north range. Entirely independent of the main building, it will be constructed of steel, and wrapped in a steel mesh. It will not be a fully weathertight element, as the mesh will allow air and limited moisture through it, and there will be several openings incorporated into the wrap. However, it will be sheltered from the rain with a solid roof.

A large multipurpose structure is proposed along the north wall of the rear yard, which will fulfil a variety of functions. Its primary function is to house solar panels for the main building, but will also serve as a bin store, external storage and a covered performance space for outdoor events. Open on all sides, it will not be insulated or fully weather tight, and will be designed to be easily deconstructed, should the need ever arise. It will not prevent future connections to the adjacent mart and handball alley site, as it does not contain solid walls, and could be reduced in size if desired.

Energy Efficiency

In 2007 Carl Elefante noted that “the greenest building is….one that is already built”. This is due to the embodied energy contains within the existing building, in terms of its material construction – its walls, roof and floors. Retaining as much of the sound structure and historic fabric as possible is the best approach from a sustainability perspective. Mass masonry walls, if well maintained, tend to perform well in terms of heat retention, due to their thickness, and there will be options at Birr Courthouse to introduce compatible means of insulating the walls, floors and roofs. Breathable insulations will be utilised where appropriate. Where windows are replaced or upgraded, slim profile double glazing will be incorporated to improve the performance of these elements. As the courthouse is a protected structure it is not required to reach current Part L Energy Efficiency requirements, but improvements and upgrades will be undertaken where possible. One area of particular improvement will be the introduction of renewable energy with the installation of solar panels to the rear of the courthouse. Throughout the detailed design stage of the project the design team will ensure that all upgrades are in line with ‘Improving Energy Efficiency in Traditional Buildings, Guidance for Specifiers and Installers’, published by the Department of Housing, Local Government and Heritage in 2023.

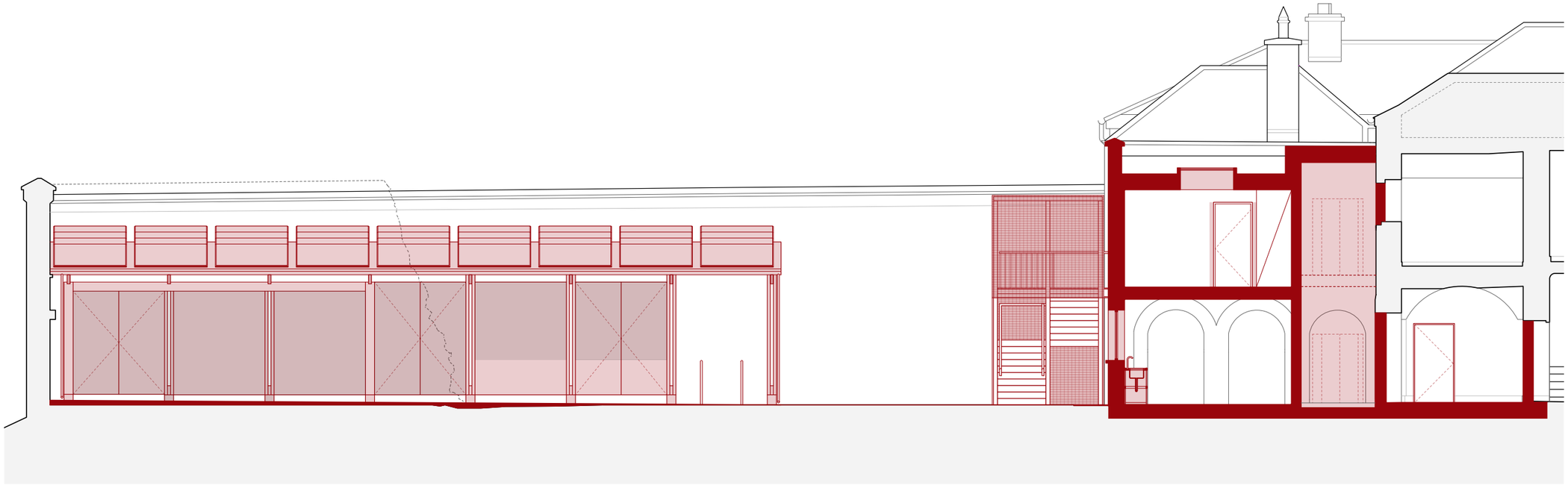

Figure 56 - Section through the rear yard and building showing the new store and escape stair

Figure 57 - View of the new covered performance space in the rear yard

Structure / Civils / Drainage

The foul and surface water drainage design is outlined on the civil engineers drawing and in the report in Appendix B. An existing sewer in the rear yard drains from south to north towards the market area at the corner of Pound and Townsend Street. It is proposed to route all foul drainage into the rear year and from there route it to the front of the building along the south laneway. It will be connected to the main public sewer in Townsend Street. The current surface or storm water drainage appears to discharge into the foul discharge, essentially a combined system. There is a negligible increase in roof area on site and the rear yard is currently an impermeable surface which will remain unaltered, so the introduction of a soakaway within the rear yard is proposed.

The flood risk report prepared by CORA engineers has concluded that there is no risk of flooding on the site.

Services

A report on the service provisions for the building is included in Appendix C, the intention in summary is to provide a more efficient and sustainable means of heating and powering the building, through the introduction of solar panels and electric heating throughout. There is no existing water fed heating system within the courthouse and it appears to have been served by storage heaters in the past. Implementation of a water fed system would require coring through existing masonry walls and running pipework to all rooms. There is also no existing gas line or boiler on site. Highly efficient electrical radiators will provide immediate heat and are a good strategy for a building which may not be in consistent and continuous use. Radiant heating panels will be installed on the walls of the courtroom, to heat occupants within this double height space quickly and efficiently.

The building will be naturally ventilated, through the use of openable timber windows but dedicated mechanical ventilation systems will be provided for the toilets, kitchens, and any communications rooms.

Lighting will be provided through efficient fixtures such as LEDs, and appropriate fixtures will be selected for the more important historic rooms such as the courtroom.

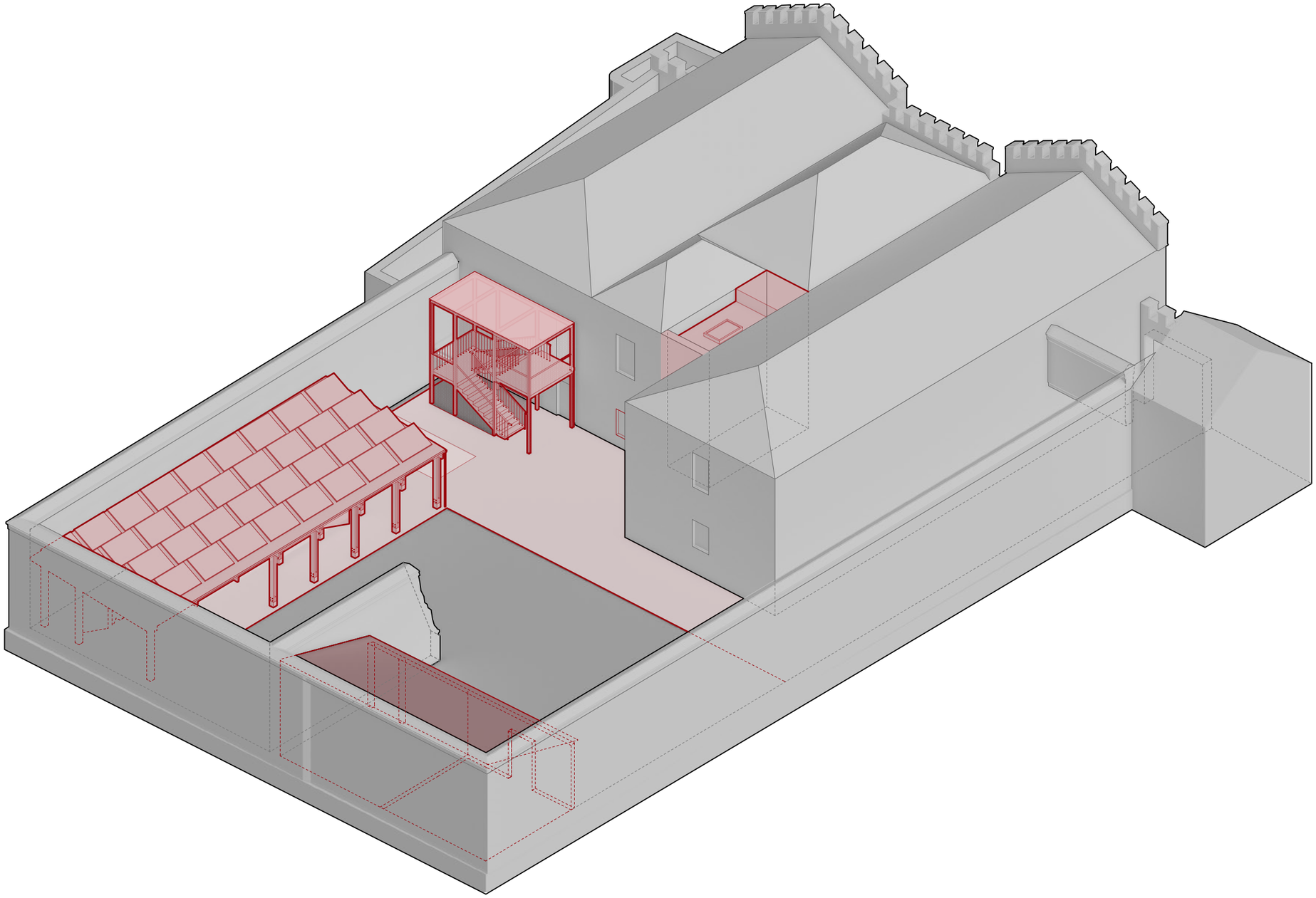

Figure 58 - 3D view of the proposed new development to the rear of the site

Accessibility

Although a protected structure, the building will be open to the public and should be made accessible where reasonably practical. Unfortunately, this structure was not designed to facilitate an easy flow of people through it, and contains multiple variations in level throughout it, so this aspect of the design has proved challenging. The various level changes apply across ground and first floor level.

It is possible to achieve accessibility at the main entrance, through some re-grading works externally to facilitate access into the entrance lobby. The ground floor of the lobby may be lowered to its original level if this will help facilitate level access throughout the central and south range. The courtroom sits slightly above the entrance lobby, and the floor will be sloped upwards into the courtroom to accommodate wheelchairs, delivering them to a dedicated wheelchair accessible zone, which will require the removal of three historic pews. The remainder of the ground floor, aside from the historic cells, will be accessible and a dedicated car parking space is proposed to the rear of the site.

It is not possible to achieve level access throughout the entirely of the first floor due to the variation of existing levels found within the building. However, a significant portion of the first floor will become accessible through careful positioning of a platform lift, which can serve two areas of the first floor at different levels. This type of lift is very suitable for use in protected structures, as it does not require a deep pit, nor a large area to accommodate the lift mechanism. While it operates at a slower pace than a passenger lift, it is suitable for this building given the small numbers of people expected to use it. One room, to the front of the building, and the gallery level of the courtroom will remain inaccessible at first floor level. It is envisioned that any future use within this inaccessible room could be accommodated elsewhere within the first floor in an accessible room. Accessible WCs are provided on both levels, and in the case of the first floor WC it is positioned close to the lift. The external escape stair to the rear of the building will also be Part M compliant.

Fire Safety

The re-purposed courthouse building must comply with the Irish Building Regulations following refurbishment. As this is a protected structure it is required to comply with the regulations where practicable. In the case of Part B (Fire Safety) the building will require a Fire Safety Certificate, as required by the Fire Safety Act, and in this area there is no exemption due to its protected structure status. However, there are ways and means to achieve a design that will be sympathetic to the historic character of the building while ensuring it also achieves a fire safety certificate. We have developed the initial fire safety strategy and reviewed it with the Offaly Fire Officer ahead of application for a fire safety cert during the detailed design stage of the project.

Due to the travel distances at first floor level, and to achieve two means of escape from this level, a new external escape stair is required to the rear of the building. Refuges will be provided for wheelchairs where required within the first floor of the building. Modifications are required to the area west of the courtroom, to facilitate an escape route from the courtroom to the rear of the building.

Ecology

Situated in the town, the building has little to no green space around it. A bat survey was undertaken in 2021 and bats were found foraging in the rear year and possibly roosting in the courthouse roof. Ahead of future works at the courthouse a bat survey would be undertaken and a derogation licence applied for if necessary.

The Offaly Swift Report of 2017 showed that Birr is a stronghold for swifts in the county, though largely based around Birr Castle. It is proposed to erect swift boxes to the rear of the building in order to provide alternative nest sites in the town.

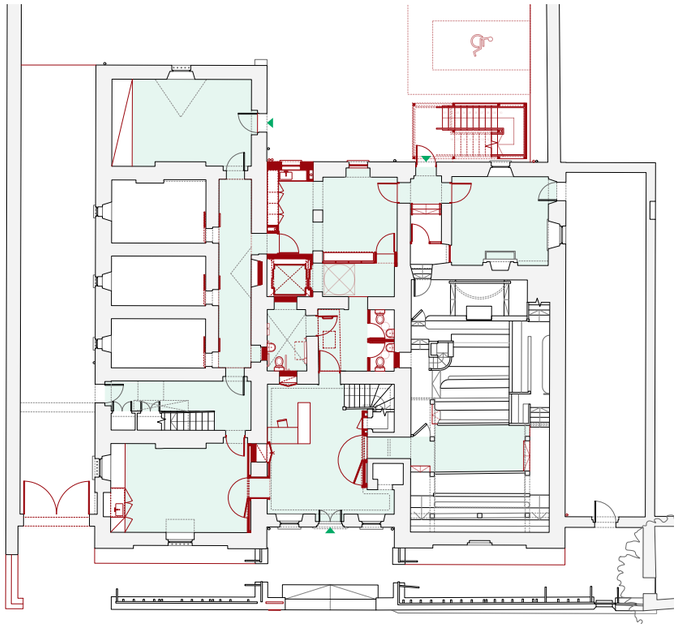

Figure 59 - Ground floor areas which will become accessible

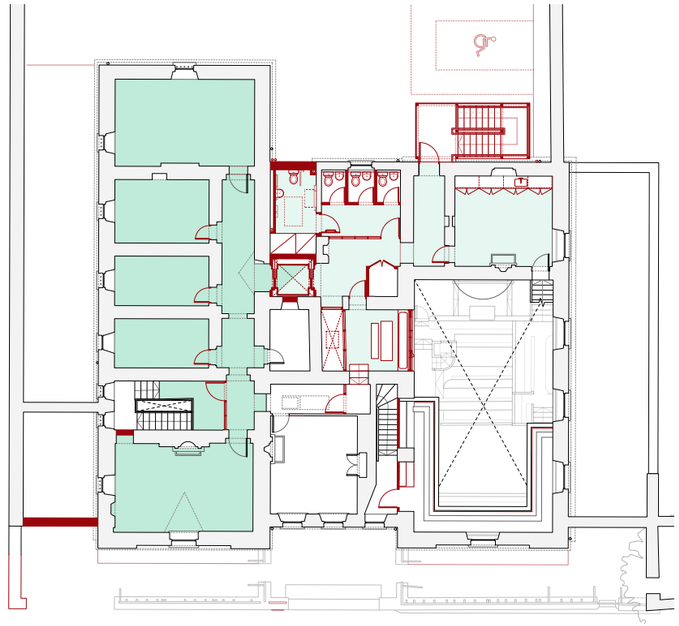

Figure 60 - First floor areas which will become accessible

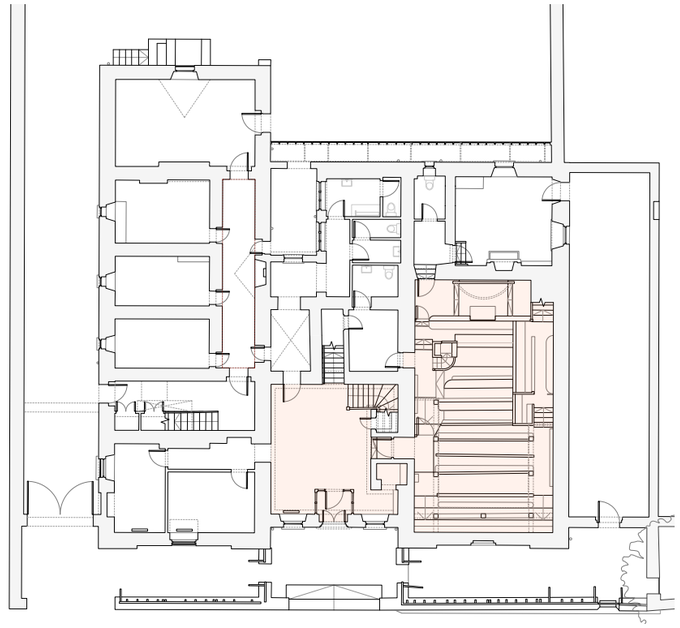

Figure 61 - Areas historically open to the public (ground floor)

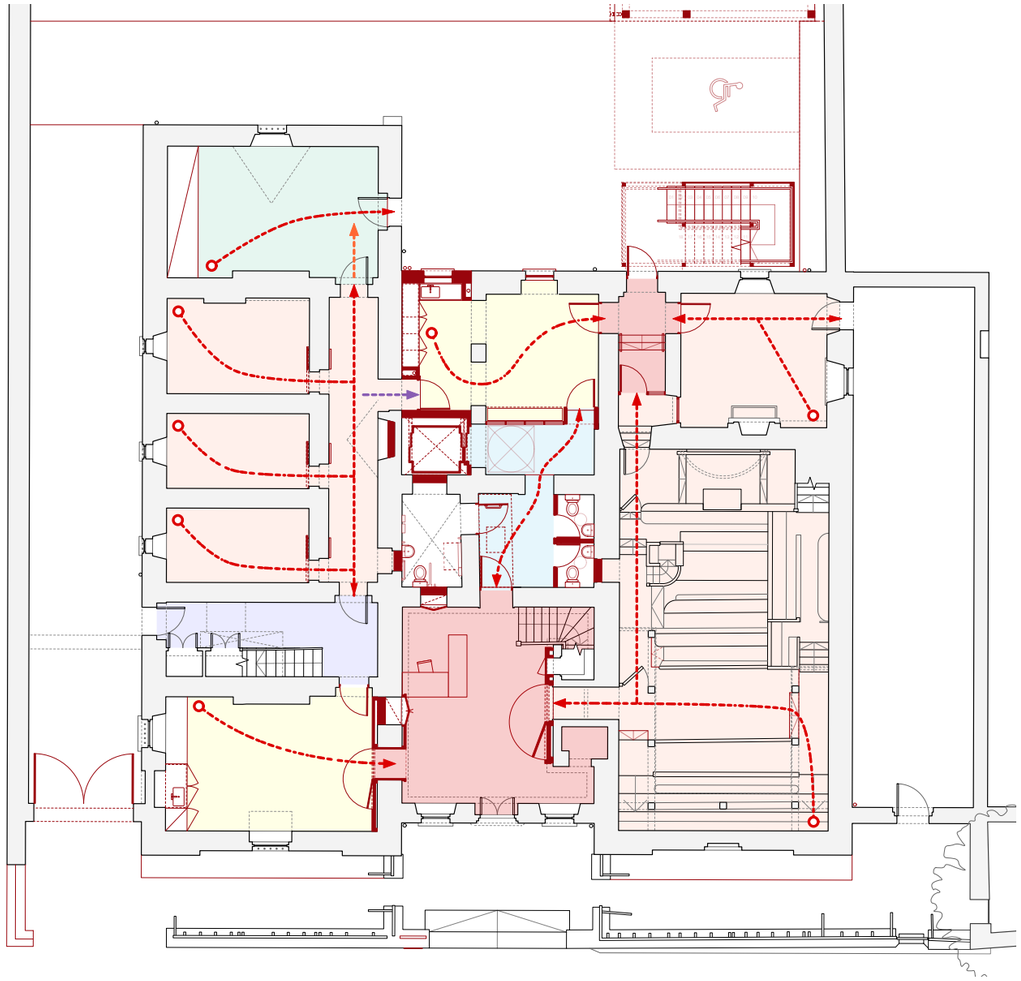

Figure 62 - Proposed Fire Strategy Ground Floor Plan

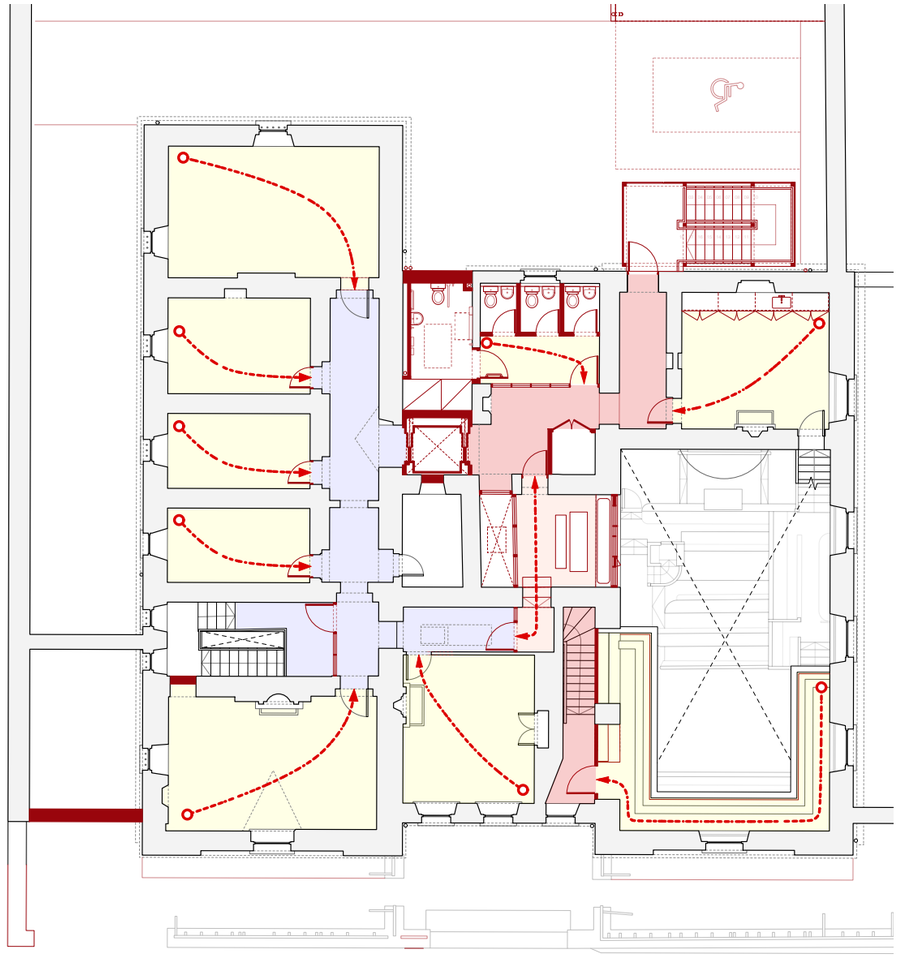

Figure 63 - Proposed Fire Strategy First Floor Plan

- Final exit
- Protected corridor / stair
- Single direction of escape
- Dual direction of escape
- Direct escape
- Lift / WC lobby
- Escape route
- Continued escape route
- Alternative escape route

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JURY BOX

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8.0 Architectural Heritage Impact Assessment

The architectural significance of Birr Courthouse lies in its external composition, in particular the facades to the north, south and west, and in its original internal arrangements, with a double height courtroom in the north range, vaulted cells in the south range, cantilevered stone stairs and collection of ancillary rooms. These significant aspects of the structure will be conserved and enhanced under the design proposals, ensuring their ongoing preservation for future generations. Interventions have been carefully considered, to ensure minimum impact on the important historic areas of the building, and the project presents a welcome opportunity to repair and refurbish the historic fabric throughout the structure.

A compatible use has been found for the courthouse, one which ensures minimal to no impact on the cultural significance of the historic site. The use is relatively low impact, requiring a series of flexible, multi-purpose rooms to be fitted out with furniture, with a dedicated service area to the rear of the building housing WCs, a lift and kitchenette facilities. This is in line with BHP-05 in the Development Plan.

The majority of the proposed internal interventions are generally reversible. Aside from proposed localised openings, to ease circulation, improve accessibility and facilitate fire escape, the majority of the internal walls will remain completely intact, and the large courtroom volume will continue to function as an important gathering or meeting space for the town and community. Removal of the timber stair west of the entrance lobby is regrettable but necessary, as it sits almost directly adjacent to the gallery stair, and from a fire safety perspective these two stairs cannot remain in such close proximity without physical separation. Its removal also greatly improves the circulation and accessible routes through the building, so on balance this intervention is considered to be acceptable. Alterations within the rear of the building, including the new infill extension, are contained within one area, and have been carefully placed within the least significant part of the courthouse.

The proposals present an opportunity to repair internal joinery and reinstate missing elements. New interventions within the building, such as new doors, screens and glazing, will be readily identifiable and are reversible.
The front (east), south and north elevations will be fully conserved and left in their original presentation, and only the rear façade will be visibly different, with the introduction of the new escape stair. This façade is the least historically significant and has also undergone the most alteration in recent years. The new stair has been designed to sit entirely independent of the building, so that it can be easily removed if necessary.

The proposed development to the rear of the building is well positioned, ensuring minimal impact on the existing building, and completely reversible. The structure along the north wall will provide welcome shelter for performers during outdoor performances, as the rear yard has proven to be a popular venue over the summer months for the Birr 20:20 group. This structure will not require substantial foundations and, built of timber, it could be easily deconstructed in the future. Solar panels will be housed on top of it and are readily accessible for maintenance and future upgrade should evolving technology require it. The roof was explored as an option for solar panels but due to the highly visible nature of the south pitched roof on the south range from Townsend Street, it was not considered appropriate to position them on such a visible roof slope. The visual impact on the protected structure was not deemed acceptable.

In order to ensure pedestrian safety, a portion of the old wall to the south of the site, at the top of the south entrance lane will be dropped. This will allow vehicles exiting the site to pause and look south, before they arrive on to the pedestrian path. Alternatively, vehicles would have to pull out onto the path to see both directions. Though the loss of a portion of this masonry is unfortunate, pedestrian safety is of greater importance, and vehicular movement to the rear will be required for wheelchair, emergency services and deliveries.

Though interventions are required to ensure the protected structure can be brought into public use, they have been well considered and on balance the impact of these alterations is considered to be acceptable.

Figure 64 - Front Elevation

9.0 Conclusion

Birr Courthouse is an important heritage asset in Birr and is of architectural, historical and social significance. It is a building of regional importance, though within the wider collective of historic early nineteenth century courthouses, it could be considered of national importance. Its original form remains largely intact together with a well-preserved courtroom interior. Though the fabric is relatively well preserved, it is in a very poor state of repair and refurbishment is necessary for the building to survive and be brought back into use.

The conservation, refurbishment and development of Birr Courthouse will ensure its ongoing preservation and provide valuable and sustainable work and amenity spaces within the town of Birr. Regeneration of these valuable historic assets within local towns and villages across Ireland is an important and worthwhile endeavour, which is now supported on a national level. It has become an increasingly urgent issue as many of these structures are falling into further dereliction and disrepair and are in danger of collapse. Robustly constructed, with fine architectural detailing, buildings such as Birr courthouse will greatly enhance the streetscape once properly conserved and developed, providing local councils and communities with new spaces to work and play.

Figure 65 - Judge's laneway entrance

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ARCHITECTURE

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Figure 66 - Jury Room

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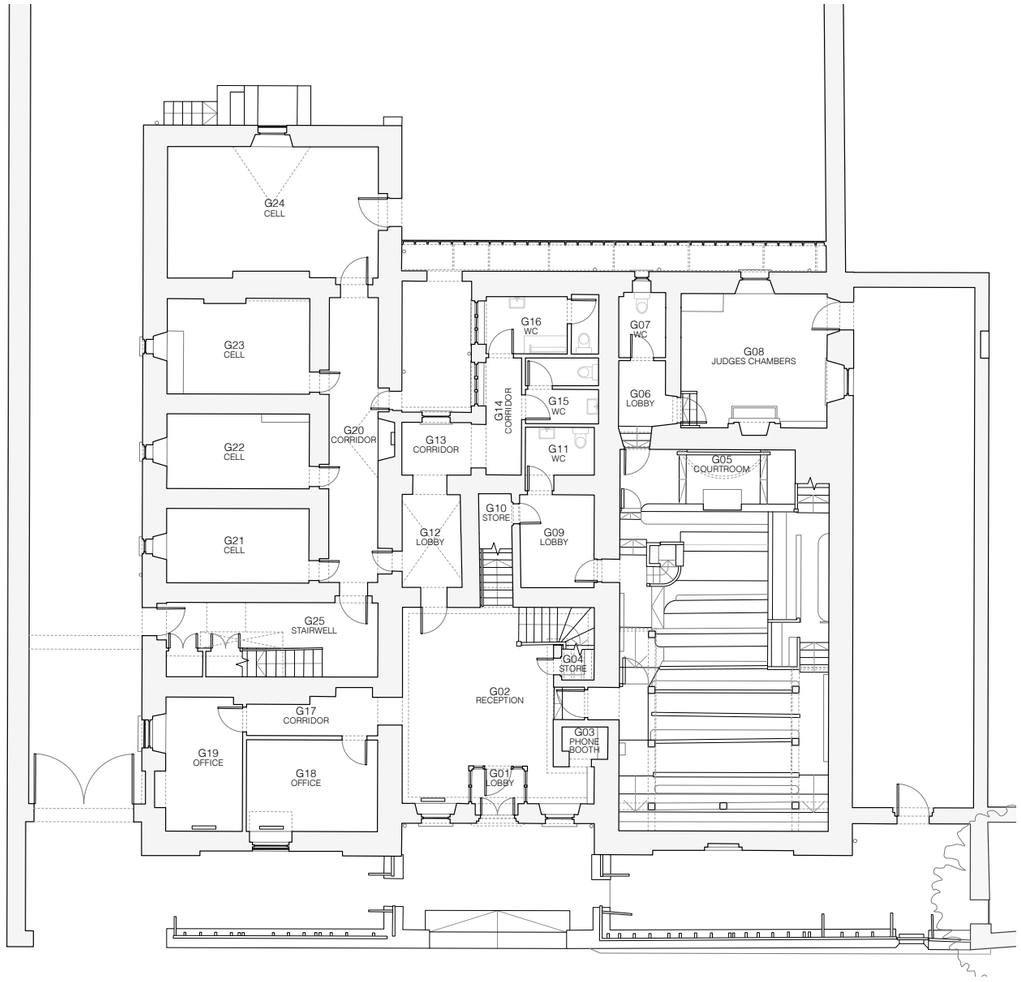
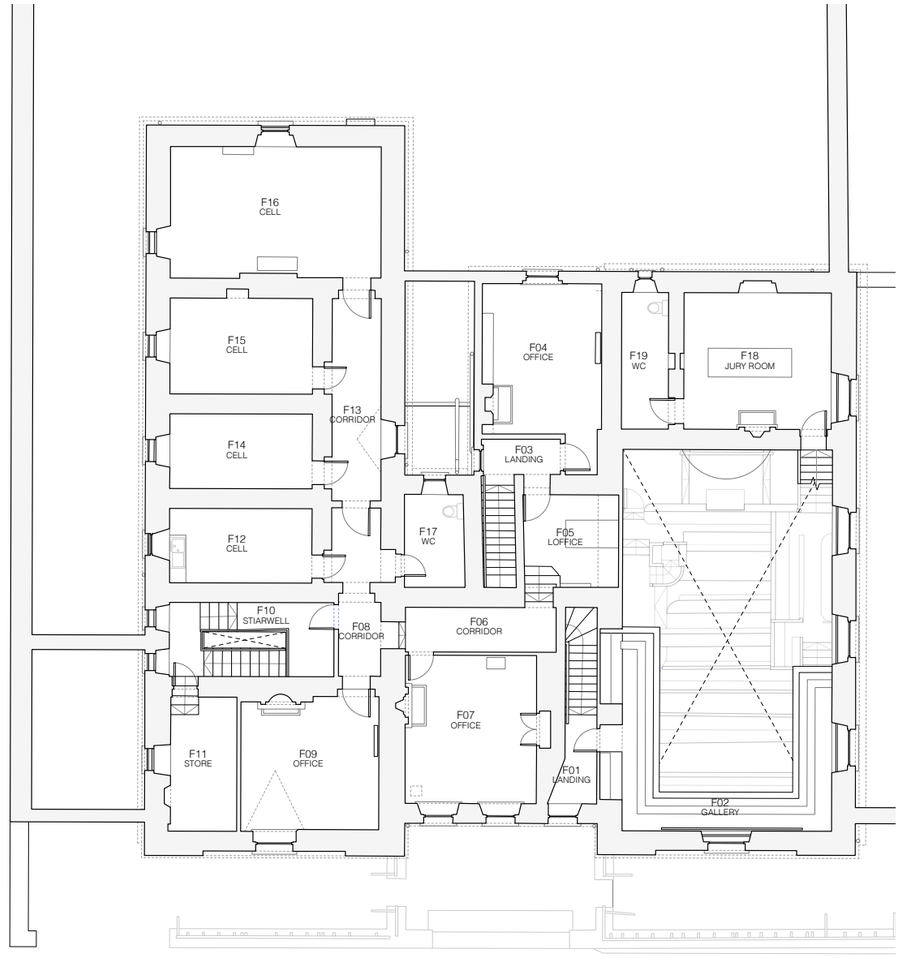
ARCHITECTURE

Appendix A

Photographic Survey





Room Numbers Key Plans - Photographic Survey

Howley Hayes Cooney

Birr Courthouse CMP - Photographic Survey

Note

This photographic survey was completed in June 2021 as part of the Conservation Management Plan, later that year works to repair the roof, refurbish the front door and windows were undertaken with grant support.

G01 – Timber frame Lobby

G02 – Reception – door into court-room (stair to courtroom mezzanine just visible on left)

G02 – Reception – stair to rear extension on right

G02 - Reception

G02 – Reception – stairs to rear extension and to courtroom mezzanine

G02 - Reception

G02 – Reception – electrical panel

G02 - Reception

G02 - Reception

G02 - Reception

G02 - Reception

G03 – Phone Booth

G04 - Store

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

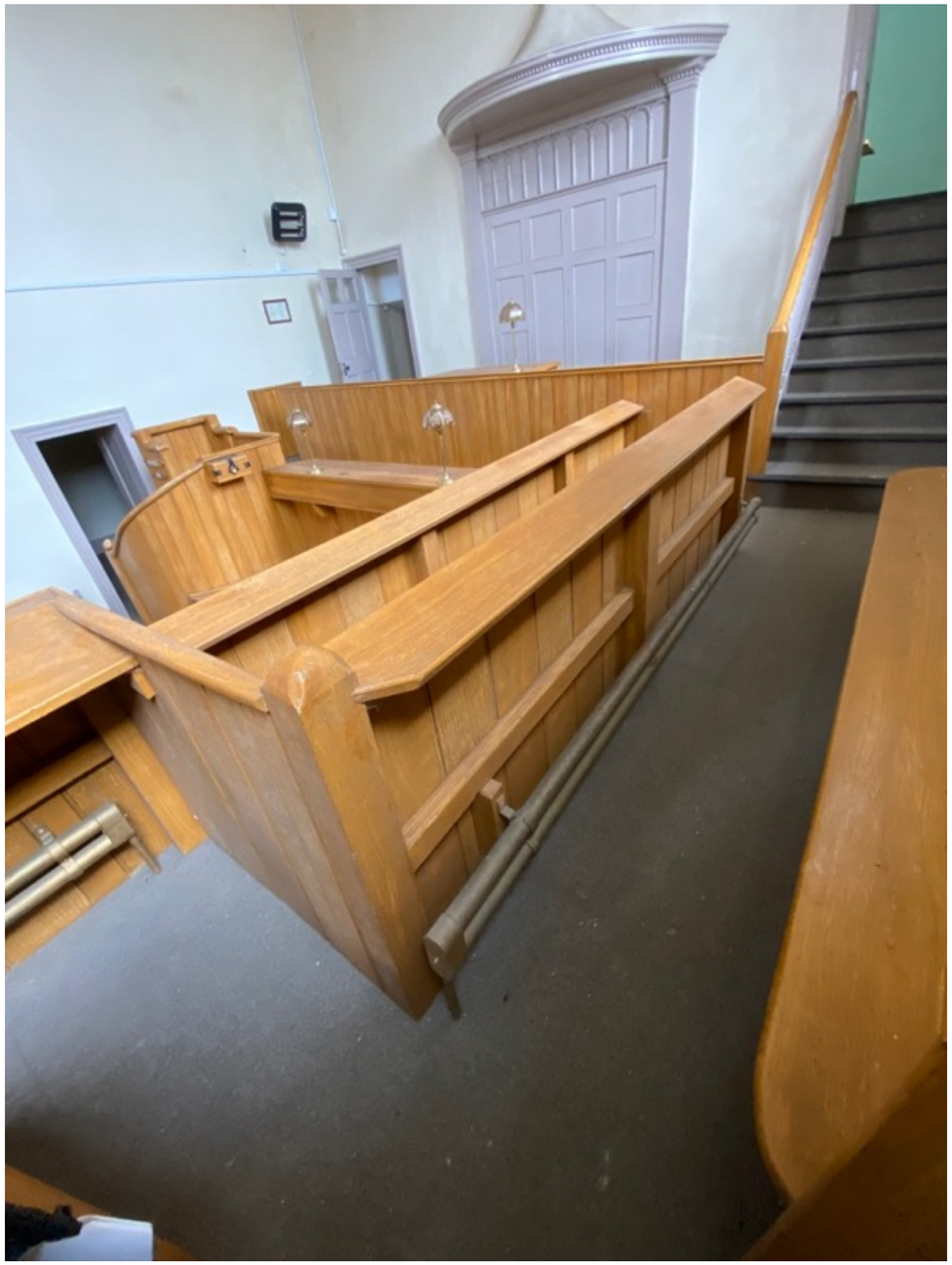
G05 - Courtroom

G05 – Courtroom – heating system

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom



G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

G05 - Courtroom

G06 - Lobby

G07 - WC

G08 – Judges Chambers

G08 – Judges Chambers

G09 – Lobby

G09 – Lobby

G10 – Store

G11 – WC

G11 – WC

G12 - Lobby

G13 - Corridor

G13 - Corridor

G14 - Corridor

G17 - Corridor

G18 - Office

G18 - Office

G19 - Office

G19 - Office

G20 – Corridor

G20 – Corridor

G20 – Corridor

G20 – Corridor

G20 – Corridor

G20 – Corridor

G20 – Corridor

G20 – Corridor

G21-23 - Cell

G21-23 - Cell

G21-23 - Cell

G24 - Cell

G24 - Cell

G24 - Cell

G25 - Stairwell

G25 - Stairwell

F01 - Landing

F02 - Gallery

F02 - Gallery

F02 - Gallery

F02 - Gallery

F02 - Gallery

F02 - Gallery

F02 - Gallery

F02 - Gallery

F03 - Landing

F03 - Landing

F03 - Landing

F03 - Landing

F04 - Office

F04 - Office

F04 - Office

F04 - Office

F05 - Office

F05 - Office

F06 - Corridor

F06 - Corridor

F07 - Office

F07 - Office

F07 - Office

F07 - Office

F08 - Corridor

F09 - Office

F09 - Office

F09 - Office

F09 - Office

F10 - Stairwell

F10 - Stairwell

F10 - Stairwell

F10 - Stairwell

F10 - Stairwell

F11 - Store

F12, 14 & 15 - Cell

F12, 14 & 15 - Cell

F12, 14 & 15 - Cell

F13 - Corridor

F16 - Cell

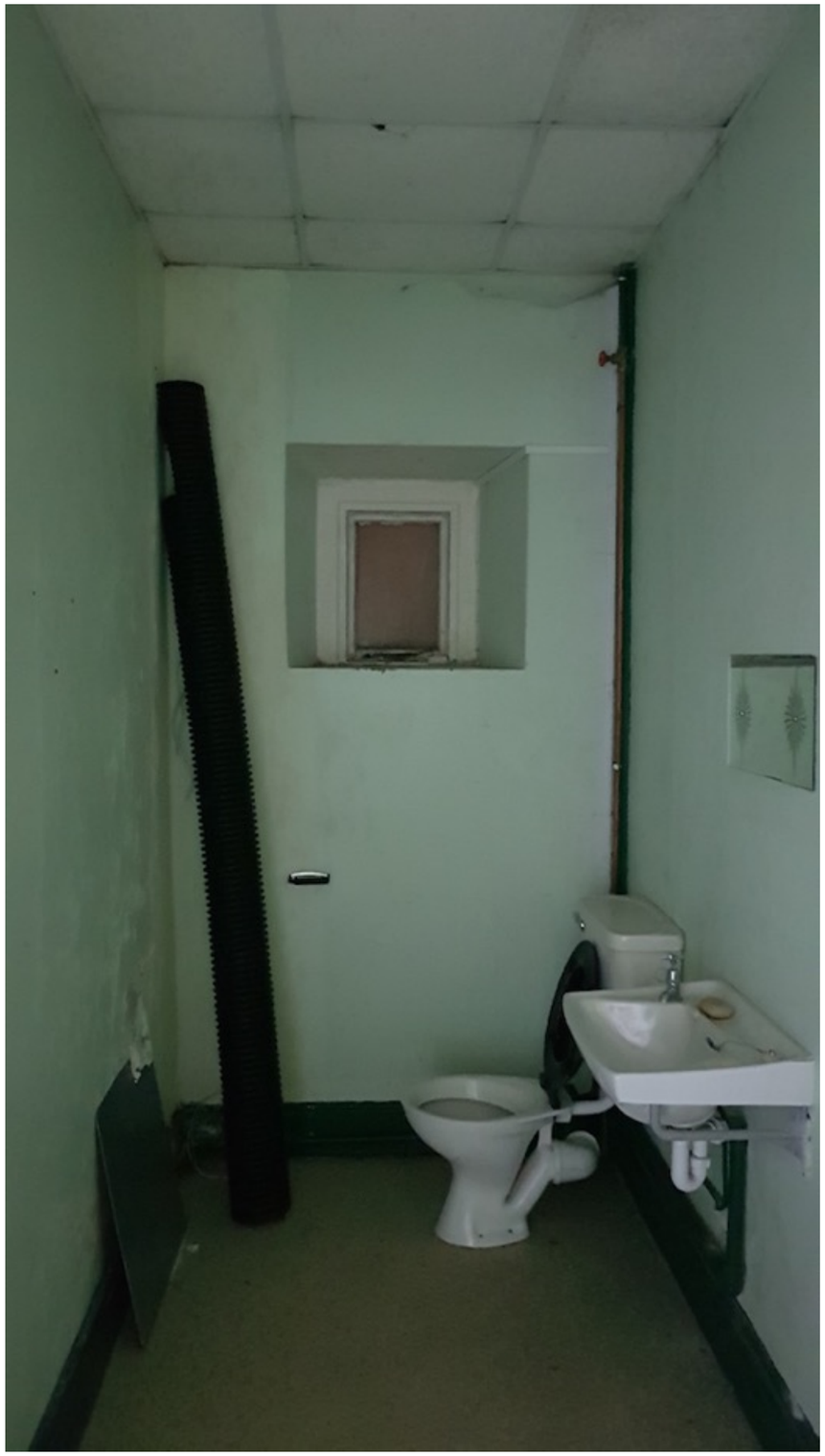
F16 - Cell

F17 - WC

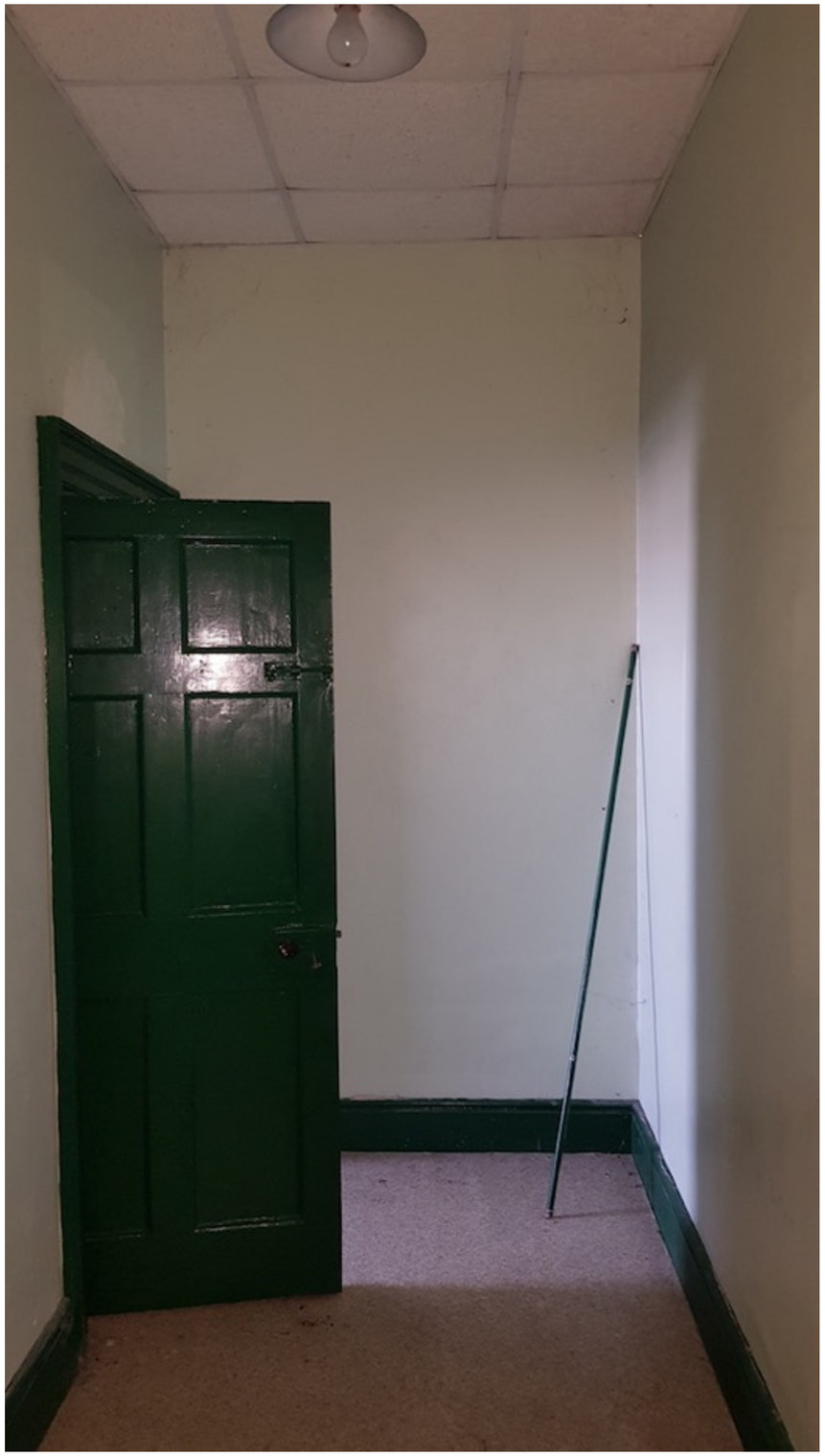
F18 – Jury Room

F18 – Jury Room

F18 – Jury Room



F19 - WC



F19 - WC

Front Elevation

Front Elevation – South Range

Front Elevation – Central Range

Front Elevation – North Range

North Elevation

Judges Lane

Judges Lane

External Plant Enclosure

Front Terrace

Rear elevation

Side laneway

Side laneway

Inner courtyard

Inner courtyard

Inner courtyard

Inner courtyard

Rear courtyard area

Rear courtyard area

Rear courtyard area

Rear courtyard area

Rear courtyard area

Appendix B

Structural and Civil Engineering Report

ARCHITECTURE

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Report on Structural Condition and Structural and Civil Engineering Methodology for Planning

Birr Courthouse

Townsend Street, Birr, Co. Offaly

July 2024 **Project 21504** **Issue No. 1**

Document Issue Record:

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30.07.2024	PL1 DRAFT	Draft	AL	LE
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Contents

1 Introduction

CORA Consulting Engineers have been appointed to act as Consulting Structural Engineers for the proposed refurbishment of Birr Courthouse, Birr, Co Offaly.

The proposed development is to refurbish the existing protected structure (RPS: 49-252) using the principles of good conservation practice and generate an accessible mixed use commercial and community space. Minimal structural interventions and changes to the existing structure are proposed. The interventions are mainly to enhance accessibility and fire safety through the introduction of a new platform lift internally and a new canopied fire escape stairs to the rear of the building.

This report shall outline how the original structural fabric shall be retained and strengthened where necessary and provide an overview of the proposed methodologies for any structural interventions.

This report has been carried out following a review of the existing drawings for the building and from a number of site inspections. No opening up works have been carried out thus far, but will be completed in detailed design stage.

2 Existing Structural Fabric to Birr Courthouse

Birr Courthouse was originally constructed as a purpose-built Courthouse and jail in c.1830. It is of great social importance to the town of Birr and one of many courthouses of similar form in Offaly and the midlands.

There are two main floor levels in the Courthouse. There is no basement. There are many level changes throughout both ground and 1st floor.

The existing structure at Birr Courthouse is formed with traditional materials with load bearing masonry walls, both solid and timber floors at ground floor and a timber roof. The first floor to the southern wing where the cells were located is generally formed of vaults and to the middle section and rear of north wing of timber joisted construction.

In general, the structural fabric is considered in sound condition and the overall building is robust. However most areas of timber first floor are in poor repair and are rotten and in places fallen.

In the south block, there are original cantilevered stone stairs and original flagstones in many of the cell rooms.

In the north block, the main court room, there is original timber joinery and a timber formed balcony gallery. There is evident water ingress on the masonry walls, which coincides with a roof valley gutter above.

3 Previous Structural Interventions

Previous structural inventions and repairs have been carried out on Birr Courthouse over the years including the addition of the central block extension. Roof repairs were carried out in the 1970s with the roof over the court room being replaced with a timber trussed roof.

Following collapse of some portions of the roof, rebuilding and repairs were carried out in 2021 to the roof, chimney and gutters. This work was overseen by Howley Hayes Cooney Architects with structural input by CORA Consulting Engineers.

4 Proposed Structural Works to Birr Courthouse

4.1 General

The building is in the ownership of Offaly County Council, previously Office of Public Works, and has been vacant since 2013 when it was last used as a public courthouse.

It is proposed to transform the building into a multi-purpose, mixed use development that can serve the community of Birr in a variety of means. The main structural interventions are proposed to be minimal and are to repair existing structure and enhance the building in accessibility and fire safety. The interventions and the restoration works required are outlined and discussed below and are indicated on CORA Structural Scheme Drawings in Appendix A.

4.2 Walls

The walls of the courthouse are rendered random rubble stone and brick masonry construction. The walls are relatively robust and generally in fair condition.
Localised masonry repairs are anticipated to be required throughout the courthouse, particularly in areas of previous water ingress where existing mortars have been washed out. Existing timber lintels will be retained wherever in sound condition, but where they have deteriorated they will be replaced with precast concrete. Replacement timber lintels will be considered where the risk of rot is considered negligible.
It is proposed to infill some existing openings. This will be carried out in masonry to match existing and a Natural Hydraulic Lime mortar, locally tying new to existing with stainless steel ties resin anchored into original. The structural form of the original opening will be retained.
New door and window openings that are to be created will be carried out using masonry to match in the reveal creation, with new be prestressed concrete lintels over.

4.3 Floors

The flagstones to the southern block are to be lifted and re-laid to facilitate laying of new insulation and services. The first floors in the south block will be retained.
The floors in the central block extension and rear part of the north wing which are predominantly rotten will be replaced with new timber joist floors. This will enhance not only load carrying capacity but adjustments of levels will also enhance the accessibility of the space. Other spaces where floors are intact will receive localised timber repairs, such as splicing or sistering of new timbers joists and localised masonry repairs.

4.4 Stairs

The existing stone cantilever stairs appear in reasonable condition structurally but will be fully assessed as part of the proposed works and judicious repairs made mindful of the sensitivity of stone cantilever stairs to alteration or removal of tread section.
The existing timber stair to the courtroom balcony will be repaired as found.

4.5 Roofs

The majority of the roofs have been recently overhauled and retained as is. The central roof section to the rear will be reformed in cut timber as a flat roof. The roof rain water disposal system in this area will be slightly revised to aid in rain water disposal.

4.6 New Platform Lift

It is proposed to insert a new platform lift in the central block. Infilling of existing openings in masonry walls with new blockwork and a new ground floor slab is required to facilitate this. No lift pit is required.

4.7 New Fire Escape Stairs

A new galvanised steel stairs will be constructed to the rear of the northern block. This will have a steel roof canopy. New reinforced concrete strip foundations will support the stairs, these new foundations will be tapered up to the underside at the existing building to avoid undermining of existing walls/foundations with additional reinforcement added to cantilever this part of the foundation. Interaction between the existing building and the new stairs will be kept at a minimum ensuring the stair is primarily self-supporting, with only lateral ties at landings.

4.8 Ancillary Buildings

It is proposed to construct a timber frame storage shed to the rear along the north boundary wall. This will be self-supporting off reinforced concrete pad foundations and not fixed to the existing masonry walls. The metal clad roof will allow for the supporting of new PV panels. It should be noted that the ground where this storage shed is located is currently impermeable and both the new ground and roof will present a impermeable surface in the storm water runoff assessment.

There is an existing blockwork and corrugated iron roofed shed along the west boundary wall. The roof appears to have deflected a considerable amount and it is proposed to demolish and reconstruct the shed in the same formation.

5 Proposed Civil Works to Birr Courthouse

5.1 Foul Drainage

There is one sewer running through the rear yard draining from south to north towards the Market area at corner of Pound and Townsend Streets. The manhole in the rear yard shows this sewer to be 225mm diameter clay ware approx 2.5m deep. This sewer may serve other sites to the south.
The site is also served with combined Uisce Eireann Assets to the front main road (N52).
It is proposed to route all the foul drainage into the rear yard and from there route via the side passage to the south, to the front of the building and connect to the main public sewer in Townsend Street.
This will give the building its own independent foul drainage route with out recourse to passing through other sites.
A connection agreement with Irish Water will be processed as part of Stage 2b design.

Appendix B contains CORA Drawing C-002 which outlines the proposed foul and storm drainage for the building.

5.2 Storm Drainage

The current collection system for the storm drainage appears to be combined with the foul drainage. Whilst there is no more storm water run-off generated in introducing more roofs, as the rear yard is currently impermeable hard standing, it is intended to introduce a new soakaway to alleviate demand on the combined system.
An onsite percolation test will be carried out post planning application to confirm feasibility of soakaway. Subject to the findings of the soakage tests the storm system may need to overflow to the combined system.
The proposal is to route new storm water drainage along side the new foul system and combine at last manhole on Townsend street, where it will connect to the combined public Sewer in the main road (N52)

Appendix B contains CORA Drawing C-002 which outlines the proposed foul and storm drainage for the building.

5.3 Water Connection

The current water supply routing is unclear, but likely enters the building to the north side.

Irish Water shows a 160mm diameter PE water supply route mediately adjacent to the footpath on Townsend Street.
A new connection agreement with Irish Water will be processed as part of Stage 2b design.

Appendix B contains CORA Drawing C-002 which outlines the proposed water connection route into the building.

5.4 Traffic Management and Sightlines

Access through the gateway to the rear can accommodate a car, van or an ambulance. 1no. disability car parking space will be provided in the rear courtyard.

The route is single lane and priority will be given to incoming vehicles. A yield sign and appropriate road markings are proposed to give way to pedestrians before exiting the site onto Townsend Street. The existing south boundary wall extends to the footpath and limits sight of pedestrians down Townsend Street before reaching the footpath. It is advised that this wall should be lowered to increase visibility to drivers before reaching the footpath on exiting the courtyard.

Vehicle tracking drawing Nos C004 and C005 and Sightline drawing no C006 are attached in Appendix C.

5.5 Flood Risk Assessment

A Stage 1 flood risk assessment was carried out on the site.
No evidence of flood risk was discovered.

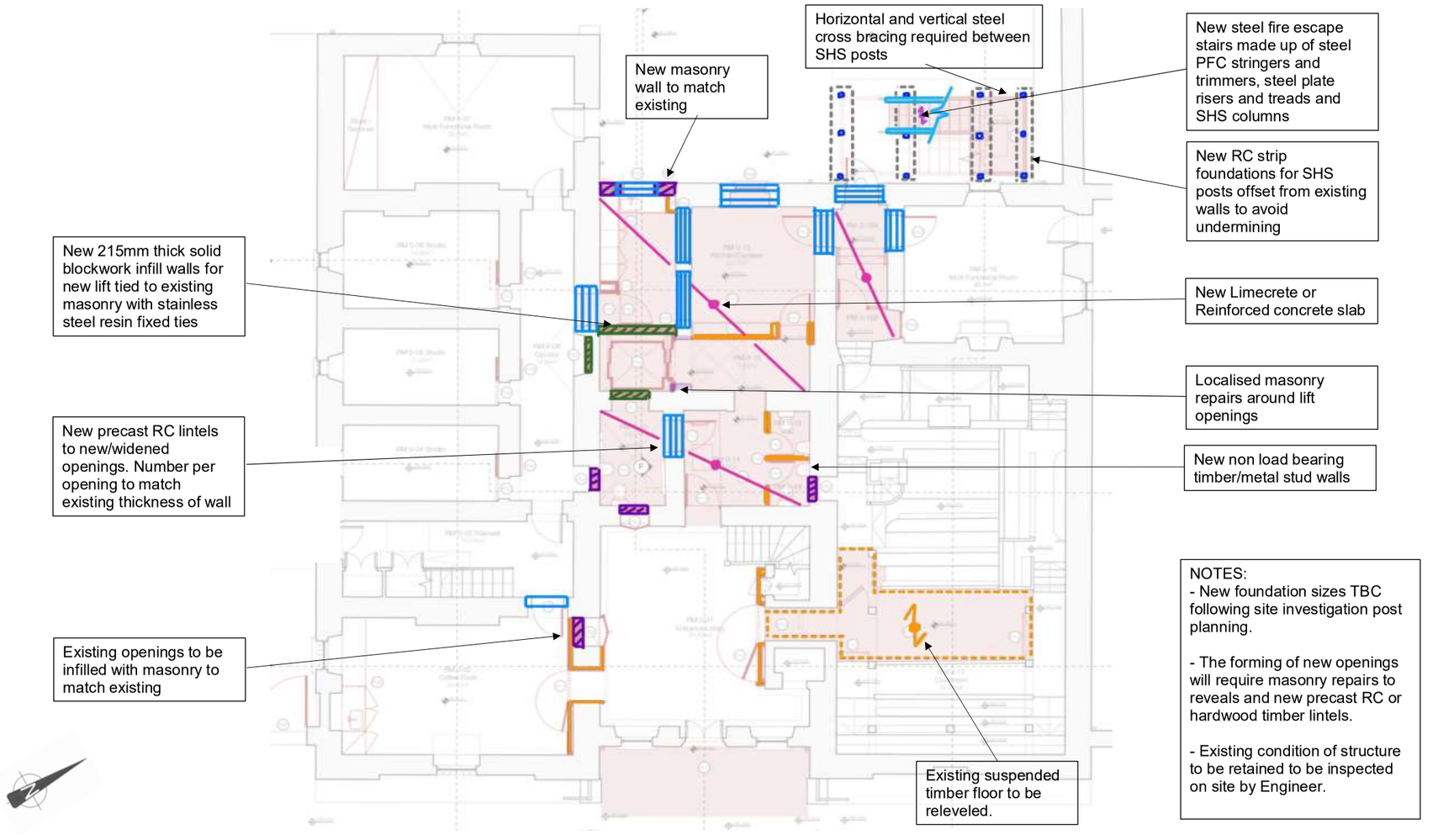
See Appendix D for the Site Specific Flood Risk Assessment (SSFRA) report.

6 Conclusions

The existing building is in reasonable structural condition for the most part.
There are opportunities to restore the structural fabric to its original form and functionality.

The proposed development shall improve the overall accessibility and fire safety of the building, facilitating a useful community space for a multitude of uses.

Modern interventions shall complement the existing fabric and be independently stable and wherever possible reversible.



Drawing Stage:	**PLANNING**					Drawn By:	Checked By:	Approved By:	Date:	CORA CONSULTING ENGINEERS	Behan House, 10 Lower Mount Street, Dublin 2. D02 HT71 Tel: +353 (0)1 661 1100 e-mail: info@cora.ie web: www.cora.ie							
						AL	LE	LE	27/06/2024									
Project Details:		PL1	Issued for Planning		AL	Project Name:	BIRR COURTHOUSE		Scale:	Project Number:								
Site Address:	BIRR, CO OFFALY	P2	Issued to design team - draft planning	30/07/2024	AL					21504								
Client:	OFFALY COCO	P1	Issued for discussion and comment	28/06/2024	LE	Drawing Title:	PROPOSED WORKS		Project:	Originator:	Zone:	Level:	Type:	Discipline:	Drawing No.:	Stage:	Revision:	
Architect:	HHC	REV. No.	REVISION DESCRIPTION	DATE	ISSUED BY		GROUND FLOOR PLAN								SK10		PL1	

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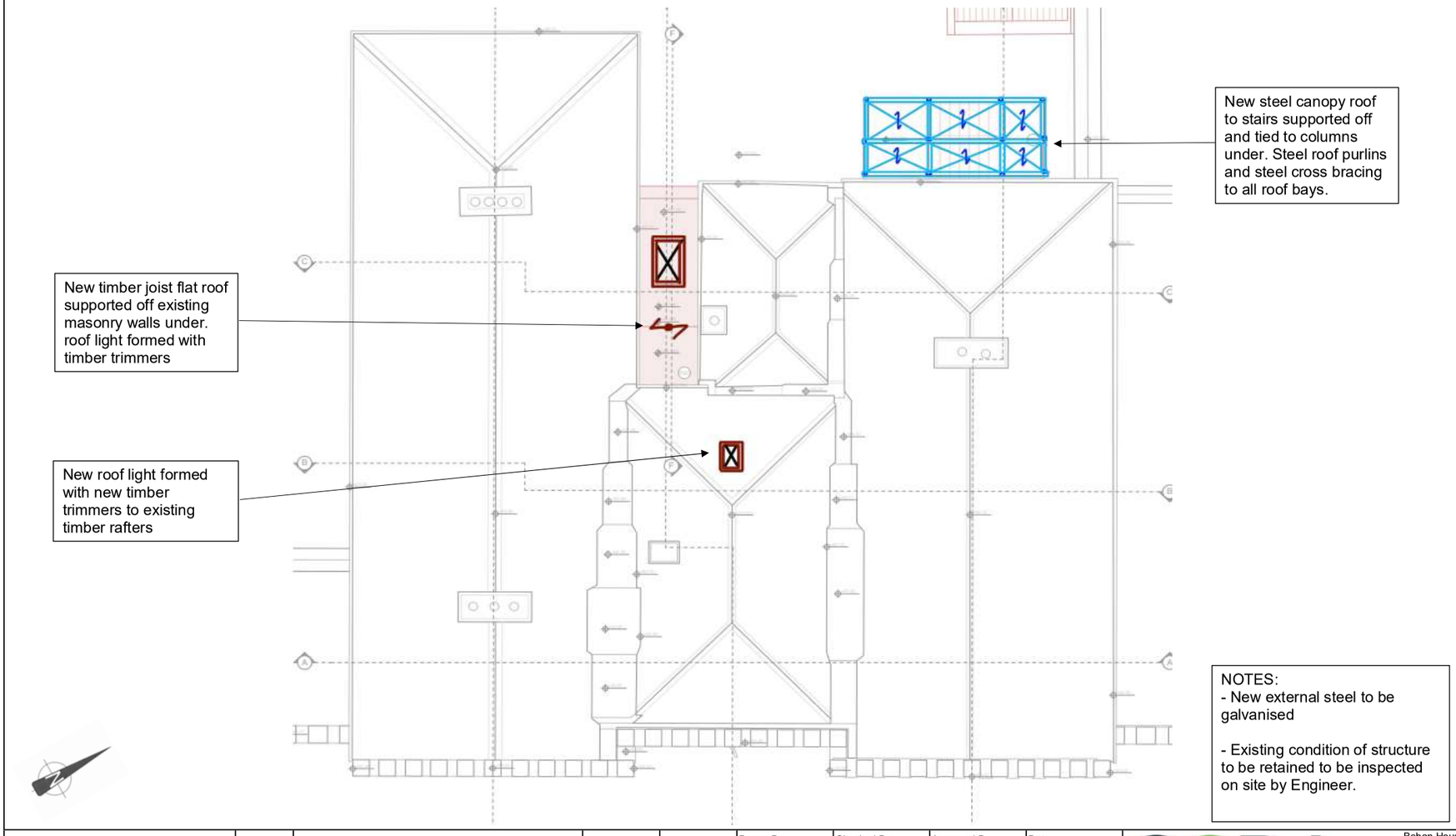
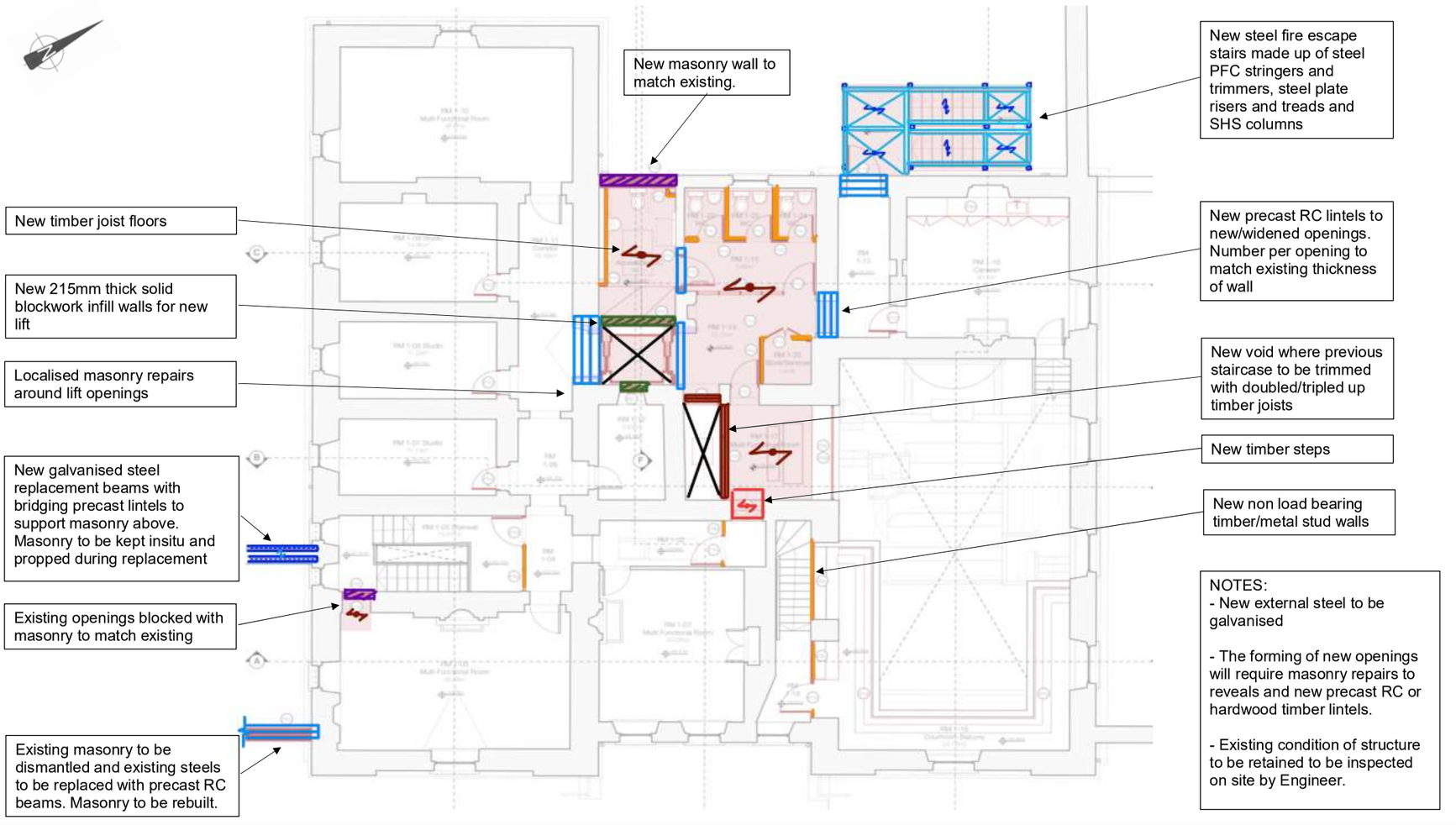
Appendix A – Structural Scheme Drawings

Drawing Nos 21504-Sk10-12 PL1



Drawing Stage:	**PLANNING**					Drawn By: AL	Checked By: LE	Approved By: LE	Date: 27/06/2024	CORA CONSULTING ENGINEERS	Behan House, 10 Lower Mount Street, Dublin 2. D02 HT71 Tel: +353 (0)1 661 1100 e-mail: info@cora.ie web: www.cora.ie								
Project Details:		PL1	Issued for Planning		AL	Project Name: BIRR COURTHOUSE		Scale:	Project Number: 21504										
Site Address:	BIRR, CO OFFALY	P2	Issued to design team - draft planning	30/07/2024	AL	Drawing Title: PROPOSED WORKS ROOF PLAN		Project:	Originator:	Zone:	Level:	Type:	Discipline:	Drawing No.: SK12	Stage:	Revision: PL1			
Client:	OFFALY COCO																		
Architect:	HHC	REV. No.	REVISION DESCRIPTION	DATE	ISSUED BY														



Drawing Stage:	**PLANNING**					Drawn By: AL	Checked By: LE	Approved By: LE	Date: 27/06/2024	CORA CONSULTING ENGINEERS	Behan House, 10 Lower Mount Street, Dublin 2. D02 HT71 Tel: +353 (0)1 661 1100 e-mail: info@cora.ie web: www.cora.ie								
Project Details:		PL1	Issued for Planning		AL	Project Name: BIRR COURTHOUSE		Scale:	Project Number: 21504										
Site Address:	BIRR, CO OFFALY	P2	Issued to design team - draft planning	30/07/2024	AL	Drawing Title: PROPOSED WORKS 1ST FLOOR PLAN		Project:	Originator:	Zone:	Level:	Type:	Discipline:	Drawing No.: SK11	Stage:	Revision: PL1			
Client:	OFFALY COCO	P1	Issued for discussion and comment	28/06/2024	LE														
Architect:	HHC	REV. No.	REVISION DESCRIPTION	DATE	ISSUED BY														

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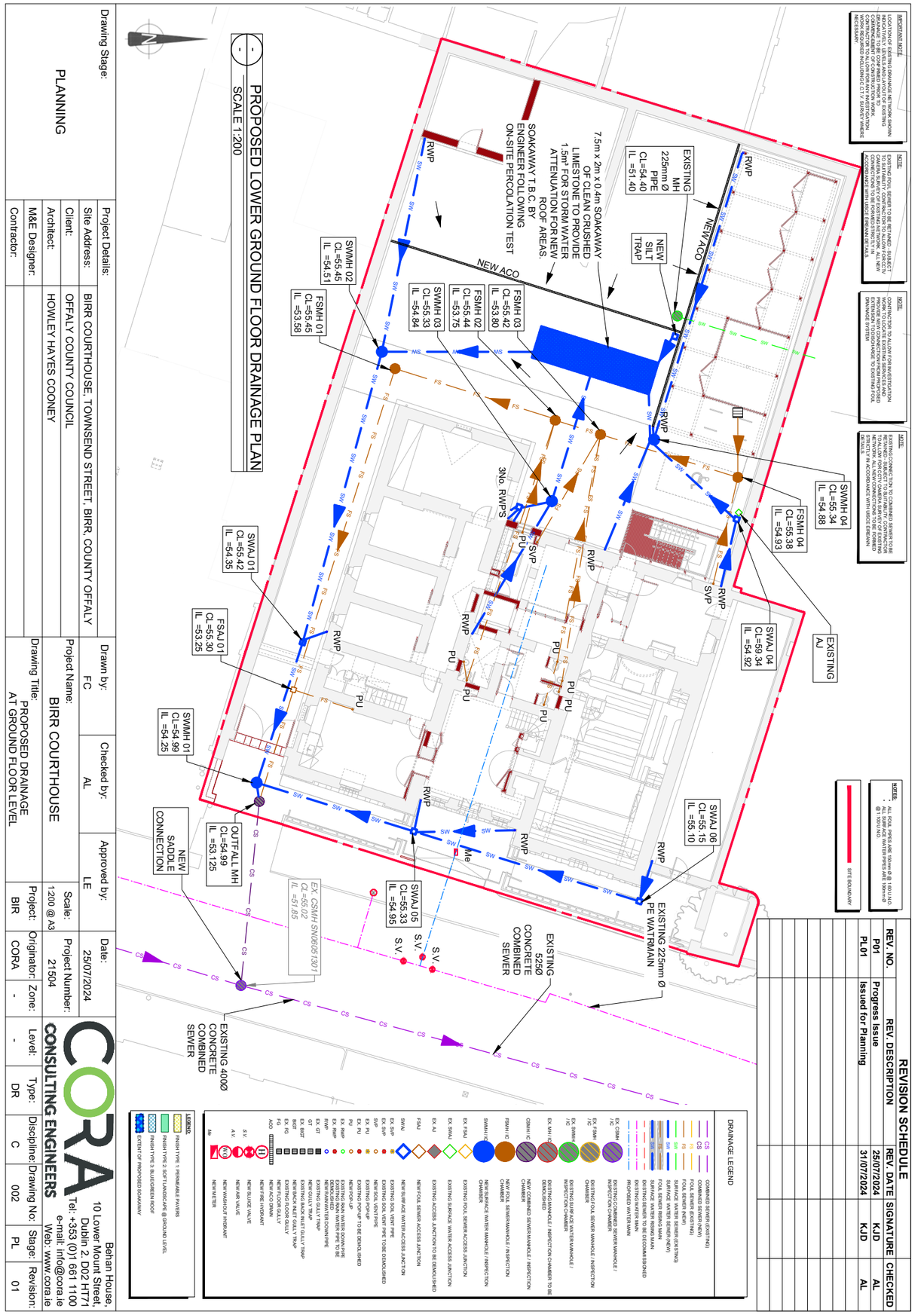
Appendix B – Drainage Drawing

Drawing Nos 21504-C002 PL1



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Appendix C – Vehicle Tracking and Sightline Drawings

Drawing Nos 21504-C004; C005; C006 PL1

REVISION SCHEDULE

REV. NO.	REV. DESCRIPTION	REV. DATE	SIGNATURE	CHECKED
P01	Issued for Approval	24/07/2024	KJD	LE
PL01	Issued for Planning	31/07/2024	KJD	LE

Drawing Stage: PLANNING

Project Details:

Site Address: Birr Co. Offaly
Client: Offaly County Council
Architect: Howley Hayes Cooney Architects
M&E Designer:
Contractor:

Drawn by: KJD
Checked by: LE
Approved by: LE
Date: 24/07/2024
Project Number: 21504
Scale: 1:250 @ A3
Project: 21504
Originator: CORA
Zone:
Level:
Type: DR
Discipline: C
Drawing No: 104
Stage: PL
Revision: 01

Project Name: Birr Courthouse

Drawing Title: Vehicle Tracking - Van, Ambulance & Car Access - Entry

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REVISION SCHEDULE

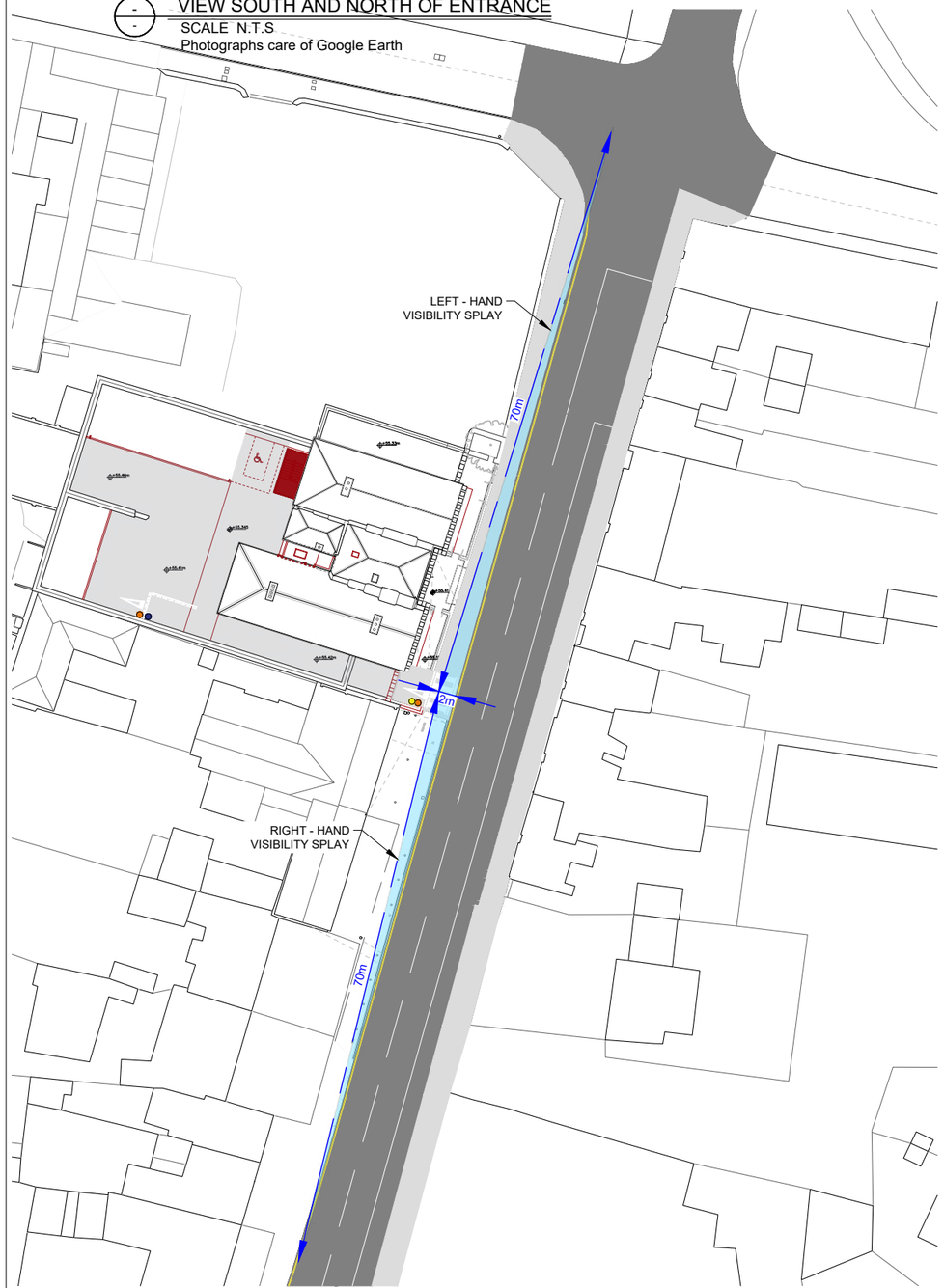
REV. NO.	REV. DESCRIPTION	REV. DATE	SIGNATURE	CHECKED
P01	Issued for Approval	24/07/2024	KJD	LE
PL01	Issued for Planning	31/07/2024	KJD	LE

VIEW FROM VEHICLES EXITING FROM REAR YARD ALONG FOOTPATH TO BE IMPROVED BY REDUCING BOUNDARY WALL TO SIMILAR HEIGHT AS FRONT BOUNDARY WALL

VIEW SOUTH AND NORTH OF ENTRANCE

SCALE N.T.S

Photographs care of Google Earth



Drawing Stage: PLANNING	Project Details:		Drawn by: KJD	Checked by: LE	Approved by: LE	Date: 24/07/2024			
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	Client:	Offaly Co. Co.	Drawing Title: Entrance Sightline		Project:	Originator: CORA	Zone:	Level:	
	Architect:	HHC Architects						Type: DR	Discipline: C
	M&E Cons.:							Drawing No: 106	Stage: PL
	Contractor:								Revision: 01

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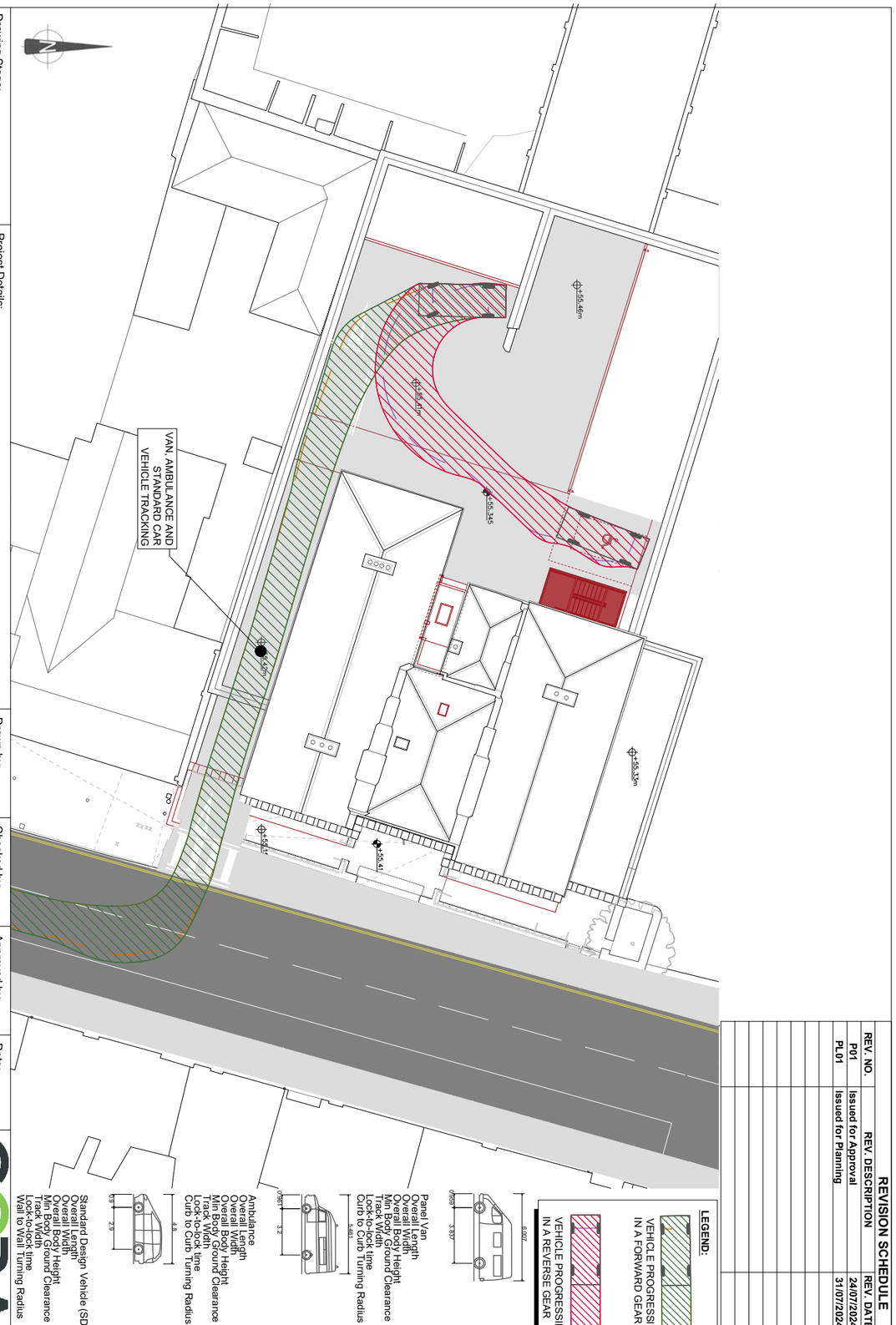

REVISION SCHEDULE

REV. NO.	REV. DESCRIPTION	REV. DATE	SIGNATURE	CHECKED
P01	Issued for Approval	24/07/2024	KJD	LE
PL01	Issued for Planning	31/07/2024	KJD	LE

LEGEND:

VEHICLE PROGRESSING IN A FORWARD GEAR

VEHICLE PROGRESSING IN A REVERSE GEAR

Panel Van
Overall Length 6.007m
Overall Width 2.231m
Overall Body Height 2.608m
Min Body Ground Clearance 0.239m
Track Width 2.231m
Lock-to-lock time 5.00s
Curb to Curb Turning Radius 7.000m

Ambulance
Overall Length 5.461m
Overall Width 2.020m
Overall Body Height 2.495m
Min Body Ground Clearance 0.235m
Track Width 1.860m
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 6.500m

Standard Design Vehicle (SDV)
Overall Length 4.800m
Overall Width 2.000m
Overall Body Height 1.950m
Min Body Ground Clearance 0.100m
Lock-to-lock time 4.00s
Wall to Wall Turning Radius 6.000m

Drawing Stage: PLANNING	Project Details:		Drawn by: KJD	Checked by: LE	Approved by: LE	Date: 24/07/2024			
	Site Address:	Birr Co. Offaly	Project Name: Birr Courthouse		Scale: 1:250 @ A3	Project Number: 21504			
	Client:	Offaly County Council	Drawing Title: Vehicle Tracking - Van, Ambulance & Car Access - Exit		Project: 21504	Originator: CORA	Zone:	Level:	
	Architect:	Howley Hayes Cooney Architects						Type: DR	Discipline: C
	M&E Designer:							Drawing No: 105	Stage: PL
	Contractor:								Revision: 01

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Appendix D – Flood Risk Assessment

Site-Specific Flood Risk Assessment Report

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Birr Courthouse

Townsend Street, Birr, Co. Offaly

Site-Specific Flood Risk Assessment Report

July 2024 **Project 21504** **Issue No.1**

Document Issue Record:

DATE:	REVISION:	ISSUE DESCRIPTION:	ISSUED BY:	REVIEWED BY:
30.07.2024	PL1 DRAFT	Draft	AL	LE
31.07.2024	PL1	Planning	AL	LE

Contents

1 Flood Risk Assessment

1.1 Objectives

The objectives of this report are to inform the planning authority regarding flood risk for the potential development of the lands. The report will assess the site and development proposals in accordance the requirements of "*The Planning System and Flood Risk Management Guidelines for Planning Authorities*".

The report will provide the following;

- The site's flood zone category.
- Information to allow an informed decision of the planning application in the context of flood risk.
- Appropriate flood risk mitigation and management measures for any residual flood risk.

1.2 Flood Risk Assessment Scope

This SSFRA relates only to the proposed development site in County Offaly and its immediate surroundings. This report uses information obtained from various sources, together with an assessment of flood risk for the existing land and proposed development. The report follows the requirements of '*The Planning System & Flood Risk Management – Guidelines for Planning Authorities',* (referred to as the *Guidelines* for the remainder of this report) and the Offaly Development Plan 2021-2027 Strategic Flood Risk Assessment (SFRA).

1.3 Existing Site

The proposed site consists of the Birr Courthouse on Townsend Street and is fronting onto the N52 road in Birr, Co. Offaly. Pound street is to the north of the site. The site is relatively topographically level. The courthouse is set in a large yard. All surfaces are impermeable with no landscaping. Stormwater is likely discharged directly to the UE combined sewers, but potential existing soakaways are to be confirmed.

1.4 Proposed Development

The proposal involves the redevelopment of the existing Birr Courthouse in Co. Offaly. The development will reuse the existing footprint of the building with the addition of minor structural interventions internally, and a fire escape stair to the rear. The roof area is mostly unchanged except the addition of an infill of circa 10m2 to small yard within the existing building footprint; a new flat roof to the storage shed to the rear and a canopy roof to the new escape stairs
For further information on the proposed development see CORA Civil & Structural Report.

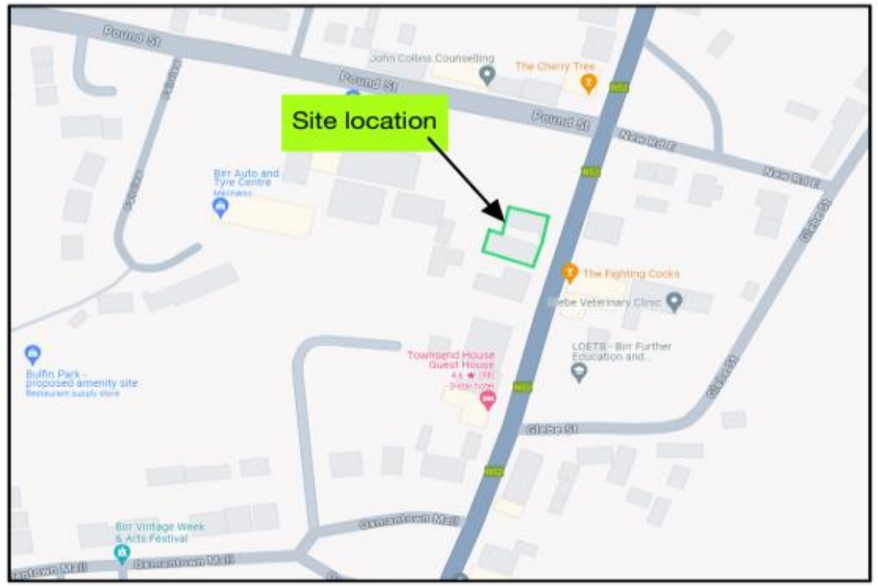


Figure 1.1 - Site Location

2 Planning Guidelines and Flood Risk Assessment

2.1 The Planning System and Flood Risk Management

The FRM Guidelines provide "mechanisms for the incorporation of flood risk identification, assessment and management into the planning process…." They ensure a consistent approach throughout the country requiring identification of flood risk and flood risk assessment to be key considerations when preparing development plans, local area plans and planned development.

"The core objectives of The FRM Guidelines are to:

- Avoid inappropriate development in areas at risk of flooding;
- Avoid new developments increasing flood risk elsewhere;
- Ensure effective management of residual risks for development permitted in floodplains;
- Avoid unnecessary restriction of national, regional or local economic and social growth;
- Improve the understanding of flood risk among relevant stakeholders; and
- Ensure the requirements of EU and national law in relation to the natural environment and nature conservation are complied with for flood risk management."

The key principles of The FRM Guidelines are to apply the Sequential Approach to the planning process i.e.;

- "Avoid the risk, where possible,
- Substitute less vulnerable uses, where avoidance is not possible, and
- Mitigate and manage the risk, where avoidance and substitution are not possible."

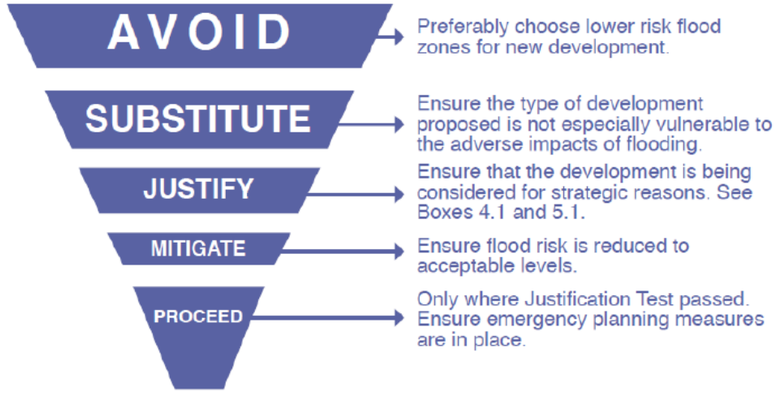


Figure 2.1. - Sequential Approach Principles in Flood Risk Management

Where the *Sequential Test's* **avoid** and **substitute** principals are not appropriate then the FRM Guidelines propose that a *Justification Test* be applied to assess the appropriateness, or otherwise, of particular developments that are being considered in areas of moderate or high flood risk.

2.1.1 Flood Risk Assessment

The assessment of flood risk requires an understanding of where water comes from (the source), how and where it flows (the pathways), and the people and assets affected by it (the receptors).

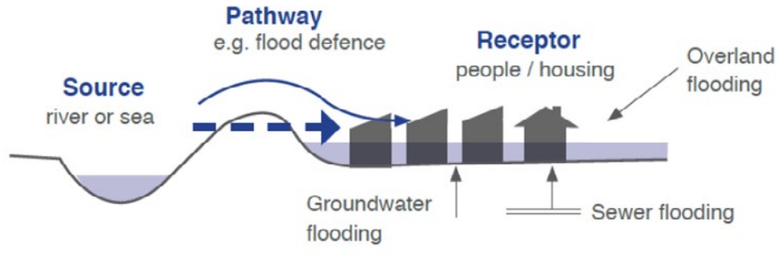


Figure 2.2 - Source - Pathway - Receptor Model

The principal sources are rainfall or higher than normal sea levels. The principal pathways are rivers, drains, sewers, overland flow and river and coastal floodplains and their defence assets. The receptors can include people, their property and the environment. All three elements are examined as part of the flood risk assessment including the vulnerability and exposure of receptors to determine potential consequences. Mitigation measures typically used in development management can reduce the impact of flooding on people and communities e.g. by blocking or impeding pathways. The planning process is primarily concerned with the location of receptors and potential sources and pathways that might put those receptors at risk.

Risks to people, property and the environment should be assessed over the full range of probabilities, including extreme events. Flood risk assessment should cover all sources of flooding, including effects of run-off from a development locally and beyond the development site.

2.2 Flood Risk Assessment Stages

The FRM Guidelines outline that a staged approach should be adopted when carrying out a flood risk appraisal or assessment. “These stages are:

- *Stage 1 Flood risk identification*
- *Stage 2 Initial flood risk assessment*
- *Stage 3 Detailed flood risk assessment*

The FRA Guidelines require a SSFRA be undertaken to assess flood risk for individual planning applications. This SSFRA comprises Stages 1, 2 and 3 involving both identification and more detailed assessment of flood risks and surface water management related to the planned development site.

2.3 Flood Zones

The FRM Guidelines use flood zones to determine the likelihood of flooding and for flood risk management within the planning process. The three flood zones levels are:

- Flood Zone A – where the probability of flooding from rivers and the sea is highest (greater than 1% AEP (Annual Exceedance Probability) or 1 in 100 for river flooding;
- Flood Zone B – where the probability of flooding from rivers and the sea is moderate (between 0.1% AEP or 1 in 1000 and 1% AEP or 1 in 100 for river flooding); and
- Flood Zone C – where the probability of flooding from rivers and the sea is low (less than 0.1% AEP or 1 in 1000 for both river and coastal flooding). Flood Zone C covers all areas outside zones A and B.

The FRM Guidelines categorises all types of development as either;

- Highly Vulnerable e.g. dwellings, hospitals, fire stations, essential infrastructure,
- Less Vulnerable e.g. retail, commercial or industrial buildings, local transport infrastructure.
- Water Compatible e.g. flood infrastructure, docks, amenity open space.

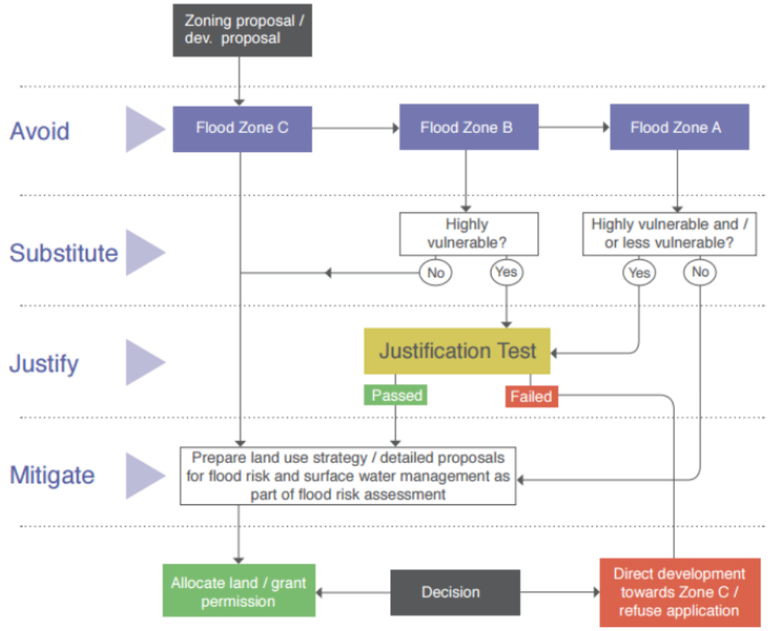


Figure 2.3 - Sequential Approach Mechanism in the Planning Process

The Sequential Approach restricts development types to occur within the flood zone appropriate to their vulnerability class, see Table 2.1.

	Flood Zone A	Flood Zone B	Flood Zone C
Highly vulnerable development (including essential infrastructure)	Justification Test	Justification Test	Appropriate
Less vulnerable development	Justification Test	Appropriate	Appropriate
Water-compatible development	Appropriate	Appropriate	Appropriate

Table 2.1 - Table 3.2 from the FRA guidelines - Matrix of Vulnerability versus Flood Zone to illustrate appropriate development and that required to meet the Justification Test

2.4 Proposed Development's Vulnerability

The proposed type of development for this site is to be mixed use – community and office. Enterprise and commercial are categorised by the Guidelines as **less vulnerable developments** and appropriate to be located within Flood Zone B and C. Residential developments are categorised as **highly vulnerable** and appropriate to be located just within Flood Zone C. To provide highly vulnerable and less vulnerable type development within Flood Zone A requires a **Justification Test** to be completed to justify development in this flood risk area.
For this development, it is categorised as Flood Zone C.

2.5 Site Specific Flood Risk Assessment for Development.

The FRM Guidelines require a SSFRA to "gather relevant information sufficient to identify and assess all sources of flood risk and the impact of drainage from the proposal". It should "quantify the risks and the effects of any necessary mitigation, together with the measures needed or proposed to manage residual risks". It considers the nature of flood hazard, taking account of the presence of any flood risk management measures such as flood protection schemes and how development will reduce the flood risk to acceptable levels. A detailed assessment for a development application should conclude that core flood risk elements of the Justification Test are passed and that residual risks can be successfully managed with no unacceptable impacts on adjacent lands.

2.6 SSFRA Key Outputs

Key outputs of an SSFRA are:

- Plans showing the site and development proposals including its relationship with watercourses and structures which may influence local hydraulics;
- Surveys of site levels and comparison of development levels relative to sources of flooding and likely flood water levels;
- Assessments of;
  - Potential sources of flood risk;
  - Existing flood alleviation measures;
  - Potential impact of flooding on the site.
- How the layout and form of the development can reduce those impacts, including arrangements for safe access and egress.
- Proposals for surface water management and sustainable drainage.
- The effectiveness and impact of any mitigation measures.
- The residual risks to the site after the construction of any necessary measures and the means of managing those risks; and
- How flood risks are managed for occupants / employees of the site and its infrastructure.

3 Stage 1 Flood Risk Identification

3.1 Available Flood Risk Information

The initial flood risk identification stage uses existing information to identify and confirm whether there may be flooding or surface water management issues for the lands in question that may warrant further investigation.

To initially identify potential flood risks for the existing Site and surrounding area a number of available data sources were consulted, these are listed in Table 3.1 below.

	Information Source	Coverage	Quality	Confidence	Identified Flood Risks	Flood Risk
Primary Data Source and Modelled Data	OPW ECFRAM – Fluvial https://www.floodinfo.ie/map/floodmaps/	Regional	High	High	Flood maps indicate that the development is not at risk of Fluvial Flooding	N
	OPW ECFRAM – Tidal https://www.floodinfo.ie/map/floodmaps/	Regional	High	High	Tidal flood maps indicate that the subject site is outside the 0.1% AEP.	N
	OCC Development Plan SFRA	Local	High	High	Development is located within Flood Zone C	N
Secondary Data Source	Walkover Survey	Local	Varies	Varies	The site is relatively level throughout. There were no areas of water ponding/flooding.	N
	OPW Historic Flood Records	Nationwide	Varies	Varies	No records of site flooding on the site. Nearest historic flood recorded ~ 650m away in 2005.	N
	Historic OSI Maps	Nationwide	Moderate	Low	Site occupied with structure for over a century	N
	Drainage Records	Nationwide	Moderate	Moderate	Existing public sewers within the site all very deep relative to the site	N
	Geological Survey Ireland Maps	County	Moderate	Low	There is no evidence of previous groundwater flooding at or adjacent to the site.	N
	Topographic Surveys	Local	High	High	Flat site with constant level of +55.3 AOD.	N

Table 3-1 - Review of Available Information

3.2 Identified Flood Risks/ Flood Sources

3.2.1 OPW Predictive and Flood Risk Info

From consultation of flood information, from the OPW's floodinfo.ie website, the site has not suffered from flooding in the past.

Fluvial Flood Risk

The OPW's CFRAM study produced flood risk maps and the assessment of fluvial flood plains. The OPW have consolidated this information onto thhttps://www.floodinfo.ie/map/floodmaps/ website. The figure below show that the site is outside the 0.1% AEP, 1.0% AEP and 10% AEP fluvial flood events.

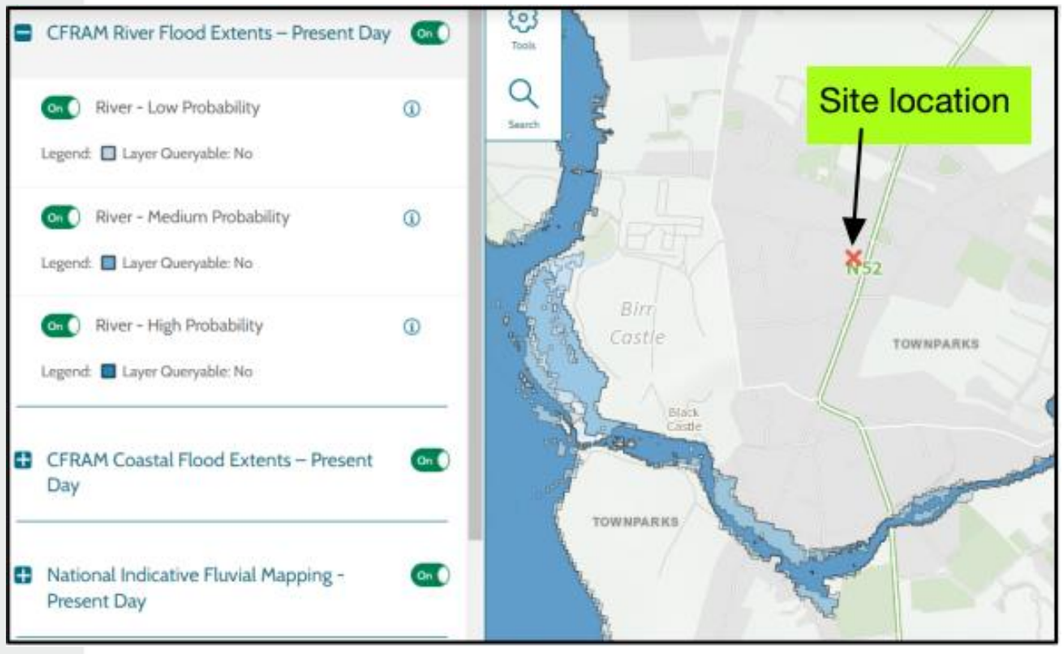


Figure 3.1 - Fluvial Flooding (0.1%, 1.0% and 10% AEP)

Tidal Flood Risk

The OPW ECFRAM coastal flood risk analysis for 10%, 0.5% and 0.1% AEP return periods show the site is outside the extents of the 0.1% AEP coastal flood event as seen in fig 3.2.

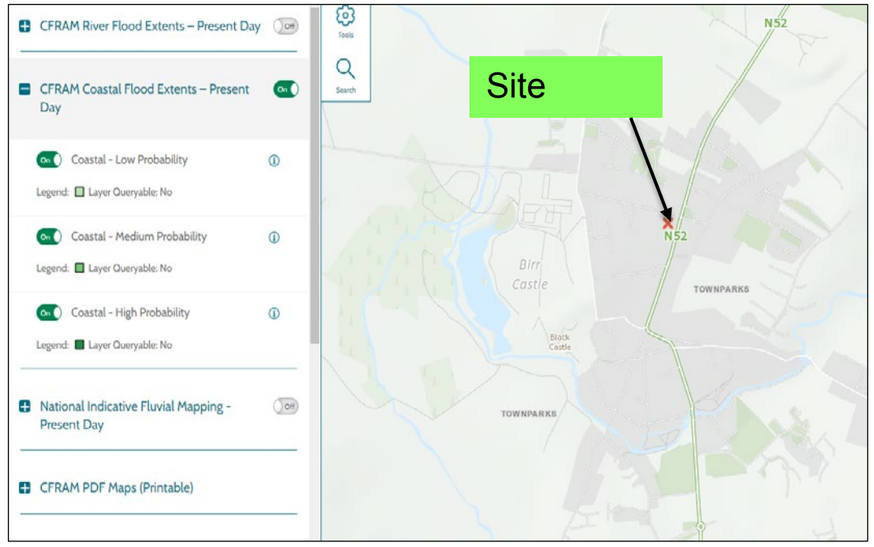


Figure 3.2 - Tidal Flooding (0.1%, 1.0% and 10% AEP)

Pluvial Flood Risk

Furthermore, the OPW's ECFRAM Study also assessed effects of pluvial flooding in the area. However localised medium risk areas are identified adjacent to the site for a 1% AEP event and 10% event outside of the site area.

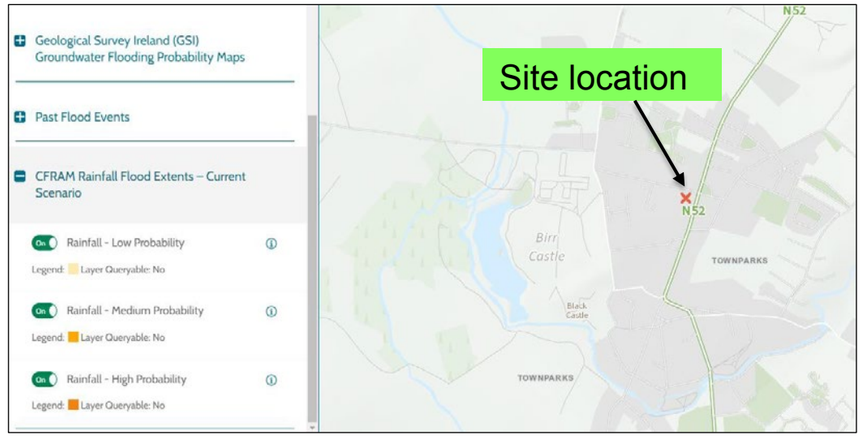
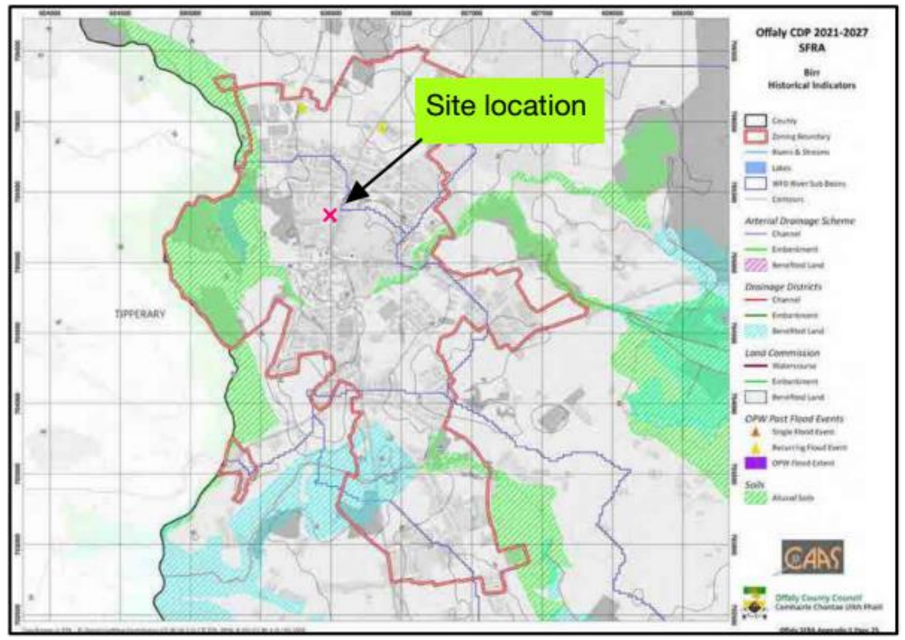


Figure 3.3 - Pluvial Flooding (0.1%, 1% and 10% AEP)

3.2.2 Offaly County Council Strategic Flood Risk Assessment

Appendix 2 of the Offaly County Development Plan 2021-2027 comprises the Strategic Flood Risk Assessment (SFRA) mapping identifies areas of flood risk. The site is located in Flood Zone C where the proposed development is permitted.



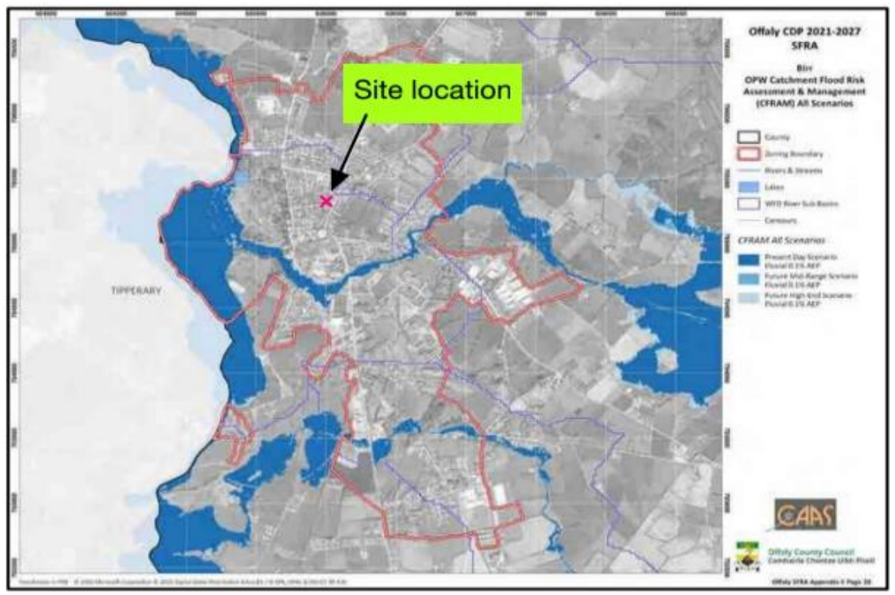


Figure 3.4 and 3.5 - Extracts from Offaly County Council Strategic Flood Risk Assessment, Development Plan 2021-2027, Estimated Flood Events.

3.2.3 Topographical Survey

Review of the Topographical survey shows the subject site is level at +55.3m AOD.

3.2.4 Walkover Survey

From a walkover of the site it is as expected and ties in with the topographical survey.

3.2.5 Other Sources

Other information sources were consulted to determine if there was any additional flood risk to the subject site, these included;

- Soil data from GSI – The entire site consists of made ground soils on gravelly clays
- Groundwater information from GSI –There is no record of evidence of groundwater flooding for the proposed site.
- Existing Local Authority Drainage Records – There is one sewer running through the rear yard that may serve other sites. The site is also served with combined Uisce Eireann Assets to the front main road (N52).
- Historic Maps – the area is part of the historic town of Birr.

3.3 Source-Pathway-Receptor Model

A Source-Pathway-Receptor model was produced to summarise the possible sources of floodwater, the people and assets (receptors) that could be affected by potential flooding (with specific reference to the proposals), see Table 3.2. It provides the probability and magnitude of the sources, the performance and response of pathways and the consequences to the receptors in the context of the mixed-use development proposal. These sources, pathways and receptors will be assessed further in the initial flood risk assessment stage.

Source	Pathway	Receptor	Likelihood	Impact	Risk
Tidal	Subject Site is outside the Tidal Flood Zone	Ground Floor	Very unlikely	Medium	Low
Fluvial	Proposed development site outside fluvial flood zone	Ground Floor	Very unlikely	Medium	Low
Surface Water Drainage (Pluvial)	Invert levels of local drainage is well below the site levels and adequate capacity is known to exist.	Ground Floor	Very Unlikely	Medium	Low
Groundwater Flooding	Ground water levels are known to be well below the proposed ground floor level and no basement is proposed.	Ground Floor	Very unlikely	Medium	Low
Infrastructural – Human or Mechanical Error	Blockage of new drainage network	Ground Floor	Possible	Low	Low

Table 3.2 - Source-Pathway-Receptor Analysis

The following paragraph provides a summary of the results of this Source-Pathway-Receptor flooding model for the subject site.

3.4 Source-Pathway-Receptor Model Results

As it can be seen in the above flooding analysis, the proposed development site is not at risk of tidal, pluvial or fluvial flooding.

Whilst there is no more storm water run-off generated in introducing more roofs, as the rear yard is already in hard standing, it is intended to introduce a new soakaway to alleviate demand on the combined system.

For further information on the proposed development see CORA Civil and Structural Report.

4 Stage 2 – Initial Flood Risk Assessment

From stage 1 no flood risks were identified and so the site is not considered at risk of flooding from any source.

5 Conclusion

This Site Specific Flood Risk Assessment (SSFRA) concludes that there is no risk of flooding at the site:

- This SSFRA for the proposed Refurbishment and additional ancillary buildings to Birr Courthouse was undertaken in accordance with the requirements of the “Planning System and Flood Risk Management Guidelines for Planning Authorities”.

- The proposed type of development for this site is to be commercial, categorised by the Guidelines as ***less vulnerable development*** and appropriate to be located within Flood Zone B or C.

- The development Site is located in Flood Zone C and is at a low risk of flooding.

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Appendix C

Services Report

ARCHITECTURE

HAYES HIGGINS

Project Managers
Chartered Civil, Structural
& Building Services Engineers

BIRR COURTHOUSE, Co OFFALY

MECHANICAL AND ELECTRICAL ENGINEERING

STAGE 1 REPORT
Rev P1

24ME011

July, 2024

CONTENTS

1. INTRODUCTION

This report covers the mechanical and electrical services for the redevelopment of the old Courthouse building in Birr co Offaly. The development will include meeting and remote working facilities. The design team have prepared a layout for the redevelopment of the building for consideration by the client. The M&E services will be designed to future-proof the facility for minimal interruption during the construction.

2. PROPOSED MECHANICAL SERVICES

2.1 Mechanical Site Services

2.1.1 Natural Gas Distribution

We do not envisage the utilisation of any gas in this development. This in-line with latest NZEB protocols to reduce usage of fossil fuels.

2.1.2 Oil

There will not be any oil used in this development.

2.1.3 Piped Water Services

In this project site fire hydrant main are included in the civil and structural package and will be detailed in the civil and structural engineers report.
The domestic water services for this building will be fed from the incoming mains water supply/connection from council. The exact position, flowrates and available pressures needs to be determined by commissioning a test/survey from a reputable company.

2.2 Drainage

An above ground, gravity fed, soils and wastes system will be installed to BS EN12056-2:2000.

2.3 Water Distribution

2.3.1 Existing Water Services

A new valved mains water connection, complete with water meter, will be provided to supply water to the cold-water storage tank, and to all other mains water outlets.

2.3.2 Water Services

The cold-water storage tank with capacity of 300L is anticipated to be housed in the Mechanical Storeroom on First Floor (Room RM1-20). All pipe-work will be insulated to reduce heat gains.

2.3.3 Domestic Hot Water (DHW) Strategy

Upon review of the DHW strategy HHP is of the opinion that a centralized DHW generation and distribution network is not justified given the scale and locality of DHW points in the building. A Localised DHW system will be more efficient and limit heat losses (and hence energy losses) encountered with the long piping runs and large storage vessel capacities associated with a centralised system.

A total of 10 no-off Under Sink Heaters are envisaged to be utilised for this development.

Figure 1: Under-sink Heater

All hot water outlets will be fitted with fail-safe lockable local TMV3 thermostatic mixing valves within 1 metre of the outlets. Groups of fittings can be combined on one mixing valve. Hot water will only be combined with cold water taps, not mains water taps for use of thermostatic valves.

2.4 Ventilation and Air Conditioning

The general ventilation strategy of this building will be by means of natural ventilation – openable windows.

In addition to the above the following mechanical extract ventilation systems will be installed:

- Extract ventilation from all toilets.

2.5 Space Heating

It is anticipated that not all rooms/spaces in the building will need to be heated at the same time. Some spaces will be used on a daily basis during office hours while others i.e. the Courtroom will only be utilised to host certain events. This expected ad-hoc room occupancy as well as the increased costs and heat losses associated with long piping routes implored HHP to rather consider a more localised space heating solution for this facility. Electrical Radiators are proposed for most spaces with Electrical Radiant Ceiling Panels to be implemented in double-volume spaces – see figure 4 below.

Figure 4: Electrical Radiators (left) and Radiant Ceiling Panels (right)

The table below provides a summary of the Ventilation and Heating strategy followed for each room.

Floor	Room name (tbc by Architect)	Area	Means of Ventilation	Heat Demand	Heatload	Electrical Heaters				Total Heating Capacity	Excess Heating Capacity
						No-off	Selected Heater	Output/ Heater	Total Heater Output		
		Sqm		(W/sqm)	(W)			(W)	(W)	(W)	(W)
GF	0.01 Entrace Lobby	33.62	Natural - Openable Windows	70	2353.4	1	RAD-05	1700	2800	2800	446.6
						2	RCP-02	550			
GF	0.02 Coffee Dock	29.35	Natural - Openable Windows	70	2054.5	2	RAD-03	1100	2200	2200	145.5
GF	0.03 Stairwell (Double Volume)	16.53	Natural - Openable Windows	70	1157.1	1	RAD-03	1400	1400	1400	242.9
GF	0.04 Studio	11.13	Natural - Openable Windows	70	779.1	1	RAD-02	800	800	800	20.9
GF	0.05 Studio	11.22	Natural - Openable Windows	70	785.4	1	RAD-02	800	800	800	14.6
GF	0.06 Studio	14.36	Natural - Openable Windows	70	1005.2	1	RAD-03	1100	1100	1100	94.8
GF	0.07 Multi Function Room	28.6	Natural - Openable Windows	70	2002	2	RAD-03	1100	2200	2200	198
GF	0.08 Corridor	14.69	N/A	70	1028.3	2	RAD-01	450	900	900	-128.3
GF	0.010 Toilet 1	5.65	Mechanical Extract - 10ACH	120	678	1	RAD-02	800	800	800	122
GF	0.12 Kitchen/ Canteen	24.17	Natural - Openable Windows	70	1691.9	1	RAD-05	1700	1700	1700	8.1
GF	0.13 Lift Lobby	6.49	N/A	70	454.3	1			0	0	-454.3
GF	0.14 Toilet Lobby	7.21	N/A	120	865.2	1	RAD-02		0	0	-865.2
GF	0.18 WC	1.8	Mechanical Extract - 10ACH	120	216	1	RCP-01	270	270	270	54
GF	0.19 WC	1	Mechanical Extract - 10ACH	120	120	1	RCP-01	270	270	270	150
GF	0.16 Multi Function Room	20.1	Natural - Openable Windows	70	1407	1	RAD-04	1400	1400	1400	-7
GF	0.17 Courtroom (Double Volume)	82.84	Natural - Openable Windows	140	11597.6	6	RAD-05	1700	10200	13500	1902.4
						6	RCP-02	550	3300		
FF	1.01 Multi Functional Room	20.02	Natural - Openable Windows	70	1401.4	2	RAD-02	800	1600	1600	198.6
FF	1.03 Multi Functional Room	28.29	Natural - Openable Windows	70	1980.3	2	RAD-04	1400	2800	2800	819.7
FF	1.04 Corridor 1.06 Corridor 1.11 Corridor 1.02 Corridor	26.58	N/A	70	1860.6	3	RAD-01	450	1350	1350	-510.6
FF	1.05 Stairwell	12.61	Natural - Openable Windows	140	1765.4	1	RAD-05	1700	1700	1700	-65.4
FF	1.07 Studio	11.13	Natural - Openable Windows	70	779.1	1	RAD-02	800	800	800	20.9
FF	1.08 Studio	11.22	Natural - Openable Windows	70	785.4	1	RAD-02	800	800	800	14.6
FF	1.09 Studio	14.36	Natural - Openable Windows	70	1005.2	1	RAD-03	1100	1100	1100	94.8
FF	1.10 Multi Function Room	28.6	Natural - Openable Windows	70	2002	2	RAD-03	1100	2200	2200	198
FF	1.12 Services/Store	5.65	N/A	70	395.5	1	RAD-01	450	450	450	54.5
FF	1.17 Multi Function Room	14.16	Mechanical Extract - 10ACH	120	1699.2	1	RAD-05	1700	1700	1700	0.8
FF	1.14 Circulation 1.15 Circulation	10.77	N/A	70	753.9	2	RAD-01	450	900	900	146.1
FF	1.16 Canteen	20.1	Natural - Openable Windows	70	1407	1	RAD-04	1400	1400	1400	-7
FF	1.21 Accessible WC	8.5	Mechanical Extract - 10ACH	120	1020	1	RAD-03	1100	1100	1100	80
FF	1.22 WC 1.23 WC 1.24 WC 1.13 WC Lobby	12.59	Mechanical Extract - 10ACH	120	1510.8	2	RCP-02	550	1100	1100	-410.8
		533.34			**46560.8**				**49140**	**49140**	**2579.2**

The table below provides the estimated electrical loads of the mechanical equipment.

Mechanical Equipment		Electrical Load (kW)	(kW)
Electric Heaters			**49140**
	Radiators	49137.81	
	Radiant Ceiling Panels	2.19	
Extract Fans			**2**
Under Sink Water Heaters			**15**
Total Load			**49157**
Diversity @ 80%			**39325.6**

3. PROPOSED ELECTRICAL SERVICES

3.1 Electrical Site Services

3.1.1 External Power Services and Supplies

The existing Main Power supply to the site is an overhead line across the main road of the town at the front of the building. The Maximum Import Capacity (MIC) will be adjusted upwards to reflect the expected increase in requirement.

3.1.2 External Lighting System

External building perimeter lighting will consist of wall mounted LED down-lighters. Wall mounted LED fittings will be specified for car park, roadway and external pathways. Luminaries outside exit doors will be complete with 3-hour emergency pack. Separate 24 hour 7 day timers and photocells will be specified for the building–mounted, security and the car park lighting, with separate 'Hand-Off-Auto' switches in an administration type office. Photocell and time-clock control will also be provided for the security and car-park lighting. External lighting levels shall conform with the latest edition of the CIBSE/SLL Code for Lighting.

Lighting will be installed to light up the front façade of the building with additional lighting to conform to Part M requirements.

The external lighting design will be simulated at Stage 2a and fully detailed for Planning purposes.

3.1.3 Telephone, Television and Broadband Services

A new underground Eircom line will be taken from the nearest existing eircom box to the main communications centre from where the service will be distributed through the building ICT system.

3.2 Electrical Supply and Main Distribution

3.2.1 Electrical Supply

The building will be provided with 400V, three-phase supply by ESB Networks from an existing overhead line across the main road.

3.2.2 Electricity Centre

The main electricity supply meter will be located in the a switchroom. A new Main Isolating Breaker will be provided. From here a new main supply cable will be routed to the New Main Distribution Board being provided which will serve sub-distribution boards for the building. The Main Board will be designed to provide for future changes as an additional 30% expansion capacity. Appropriately rated de-tuned, self-contained Power Factor Correction Capacitor units shall be provided in separate steel enclosures adjacent to the new Main Distribution Board.

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3.2.3 Main Distribution

From the main Sub-Distribution Board dedicated sub mains cables will be distributed to numerous sub-distribution boards and motor control centres throughout the building including existing areas. These SWA cables shall be routed on a system of underground ducts, galvanised steel cable ladders and trays as appropriate.

A system of galvanised steel cable ladder, tray and trunking will be designed to distribute sub-mains, general & emergency lighting, power, fire alarm, access control, security and mechanical services control wiring throughout the building. Separate basket and trunking will also provided for data. Separate systems shall be segregated in accordance with the ETCI National rules for electrical installations.

All distribution boards will be designed to provide for 30% expansion capacity.

Power Factor Correction will be incorporated wherever the power factor might fall below 0.95. The largest switched stage will be 5 to 10kVAr.

3.2.4 Backup Power Generator

We do not envisage backup power being required for the development.

3.3 Power

3.3.1 Power Distribution Services

Socket outlets shall be 13 Amp type and shall be wired in 20 Amp maximum radial circuits and carried in galvanised steel conduit and cable trunking. Quantities and locations of outlets will be detailed at Stage 2. DADO trunking will be included in office areas.

Fixed items of equipment will be supplied via fused, switched cable outlets and isolators, suitably rated.

3.3.2 Earthing

The objective of the system is to provide an effective system to minimise danger to life and equipment arising from:

- Faults between line conductors and non-current carrying metal work
- Atmosphere discharges
- Accumulation of static charges
- The design parameters are defined within the ETCI National rules and ESB Regulations for Electrical Installations.

This system will be detailed and included in the building services specification at a later stage.

3.4 Lighting

3.4.1 Internal Lighting System

The internal lighting system will be designed to provide the levels of illumination appropriate to each type of activity within the building as recommended in the room data sheets and the CIBSE Code for Interior Lighting.

Low energy lighting shall be utilised throughout and the majority of the general lighting shall be provided by means of LED type fittings where appropriate.

3.4.2 Lighting Control

An automatic lighting control system will be specified for areas where such control will not interfere with the functions of the rooms. In offices combined daylight/absence sensors shall be provided that shall automatically dim lighting to off when there is sufficient daylight in the room, dim lights to take advantage of daylight harvesting and also dim to off if the room is vacant for more than three minutes. A manual push switch will be provided in the offices and other 'owned' areas to allow the lighting to be switched from off to auto mode. The automatic sensors shall be specified to have adjustable lux and time elements.

Circulation lighting will be designed to be controlled by manual switching with absence detection turning lights off if circulation areas are vacant for more than 5 minutes. In circulation areas where there is adequate daylight daylight-harvesting is incorporated in the same manner as offices. Dedicated key-operated isolating switches will also be provided at the main admin office.

Lighting control in toilet areas and ensuites will be controlled via PIR detectors with appropriate run on timers.

All internal lighting systems will be detailed fully in drawings at a later stage.

3.4.3 Emergency Lighting System

A system of escape route emergency lighting will be designed in compliance with IS 3217 and will be a separate non-maintained LED emergency lighting system. It is envisaged that an addressable system will be provided.

Also emergency lighting will be provided in the same manner in all habitable rooms in compliance with IS 3217.

In the event of power failure each emergency fitting or exit sign will illuminate for a period of 3 hours.

The layout and details of the emergency lighting design will be provided in drawings at Stage 2b.

3.5 Communications

3.5.1 IT Installation

All cabling shall be terminated in the new comms cabinet. It is envisaged that 1 No. 47U cabinet shall be provided in the comms room for housing patch panels and active equipment. Data cabling shall be specified as being terminated in RJ45 outlets at both ends.

Separate broadband lines from the service provider's main incoming termination frame to the Comms room shall be specified for Internet (WAN) connection.

The Comms room will be provided with appropriate cooling via a split unit to maintain suitable operating conditions in the space.

HHP will specify that all data cabling be installed in a separate ELV basket and/or trunking system and room points. A CAT 6a cabling system shall distribute data within the building.

The location of the main cabinet should be very central to allow for compliance with the 90m rule for all proposed outlets within the building.

Appropriately rated fibre links shall be provided to the existing main Comms Room and patch panels to maintain all existing services to the existing buildings.

3.5.2 Telephony

A separate cabling system shall be provided for a PABX system, which shall not be provided under the electrical services contract. All cabling shall be category 6a and shall terminate in RJ45 outlets. All telephone cabling shall be terminated in a wall mounted 'Krone' frame in the Comms room. From this frame, CAT 6a cabling shall link to the PABX. The local area has sufficient eircom infrastructure to support the proposed telephone services.

3.5.3 Provision for the Hearing Impaired

Induction loops will be provided to reception areas.

3.6 Security and Protection

3.6.1 Access Control System

Access will be controlled to certain areas through the use of swipe cards and/or fobs with a full access group management system to allow levels of access to be easily assigned and controlled. Restricted access via these access control units shall be provided in discussion with the end user.

Entry and exit to the building will also be controlled as per the site requirements including the use of audio-visual access control at the main entrance.

3.6.2 Intruder Alarm System

A system of pir and window sensors will be installed in the building to provide a very simple security alarm system. The system shall be supplied and installed by a certified company under the National Standards Authority of Ireland.

3.6.3 CCTV System

A fully digital closed circuit television system shall be provided to ISEN50132 and IS199. The system shall comprise of a digital recording and monitoring facility. The CCTV system installation shall not be covert but rather be visible.

19-inch high-resolution, colour display, multi-camera monitors shall be provided at the Reception. Each camera shall be contained in a housing suitable for its environment.

The number and location of CCTV cameras to be installed is to be evaluated at a later stage in line with the particular site security requirements.

This system will be specified as an 'open protocol' from the installer.

3.6.4 Fire Detection and Alarm Systems

A fully addressable fire alarm system consisting of a fire alarm panel, automatic detectors, manual call points and alarm sounders will be designed throughout the building in accordance with the Irish Standard IS 3218. Layout and details of the fire alarm system will be detailed at a later stage.

The entire system will be controlled from a new master fire alarm panel located in the main entrance area and shall provide L1 coverage to the building.

Fire dampers will also be linked to this system should there be required when penetrating fire walls.

This system will be specified as an 'open protocol' from the installer.

3.6.5 Emergency Call System

An emergency call system shall be provided for disabled and assisted toilets comprising pull cords and alarm outside the room linked back to the reception.

3.6.6 Lightning Protection

A calculation risk analysis on the recommended requirement for lightning protection (based on IS EN 62305) will be undertaken by HHP. It is envisaged that both internal (surge protection) and external Lightning Protection will be required.

Lightning protection shall be in accordance with IS EN 62305 consisting of surge protection to distribution boards, roof top air terminal network, down conductors and earth pits. Use shall be made of metal elements of the roof and structural steel where possible. All extraneous metal parts on or above the roof level shall be

bonded to the lightning protection system. Internally all metal parts including cable tray and trunking, heating and ventilation pipework and ductwork, radiators, sinks, etc. shall be bonded to the building's main earth terminal. All metal incoming services shall also be bonded to the main earthing terminal.

3.7 Photovoltaic System (PV System)

It is proposed to implement a PV System in order to offset against the electrical load demands imposed by the Mechanical Systems installation.

The current proposed location for a PV system in the back yard can provide 19kWp with an estimated 31,536kWh annually. That equates to an estimated 25% of the annual electrical consumption of the building.

4. THERMAL PERFORMANCE OF BUILDING:

The detailed thermal performance analysis for BER purposes is not required due to this building being considered a protected structure.

5. CONTROLS:

5.1 Heating Controls

All Electrical Heaters will be locally controlled per room with one switch provided per room to activate all Electrical Heaters present in the room.
The Electrical Heaters will be pre-programmed to a setpoint temperature of 21°C.
The DX AHU will have a wall mounted controller located at the entrance of the room from where the unit can be switched on and off and the heating/cooling mode and temperatures can also be selected.

5.2 Extract Fan Control

All Toilet extract fans will operate on a time schedule i.e. 08:00 – 17:00. The final time schedule will be determined and set in consultation with the Client.

5.3 Lighting Controls

The design parameters are those defined in the Chartered Institution of Building Services Engineers lighting code. Light switching in all rooms shall be arranged so that individual banks can be separately switched.

An automatic lighting control system shall be provided in all non-critical areas, including toilets. The lighting system shall comprise of Dimmable Control Daylight/movement Sensors, Auto/Off switches and Momentary switches. The switching arrangements shall be as follows:
Each switch shall operate using an Auto/Off strategy. If the switch is in the OFF position then the associated lights shall be off. If the switch is in the ON position then the lights shall turn on to the required light level only if the detectors sense that the room is occupied AND the photocell sense that there is an inadequate lighting level in the room.
Detectors shall generally operate with a ten minute delay, i.e. No movement in the room for ten minutes will result in the lighting being switched off. The detectors in toilet areas shall operate with a five minute delay,

i.e. No movement in the room for five minutes will result in the lighting being switched off. The light level sensors shall be programmed as follows:

- The Average working plane illumination levels as stated above shall be constantly maintained.
- Each sensor shall adjust the illumination levels of the lights / row of lights connected as required.
- Where day light levels are above the required illumination levels lights shall be switched off.

All circulation lighting shall be controlled automatically by daylight/absence sensors.
Manual switches shall generally not be provided except in the rooms which will be “owned” areas for clients. Corridors shall work in Presence mode in that lights are activated on detection of movement. However two ‘Hand-Off-Auto’ override switches shall be provided in or around the administration office for control of the circulation lighting.

5.4 BEMS System

For the purpose of gathering information on the building’s performance the following points shall be connected to a building energy monitoring system, controlled from a computer software programme, that shall provide graphical presentation, a traffic light warning system and text alarms:

- Electricity Consumption measured at each sub-board broken into general services, electrical heating and lighting.
- Total water usage (Mains)
- External Temperature Sensor
- Cold Water Services Tank Pump Electrical Consumption

6. M&E PLANT REQUIREMENTS:

Below drawing demonstrates the space requirements of the main M&E Plant to be located on the First-Floor plantroom.

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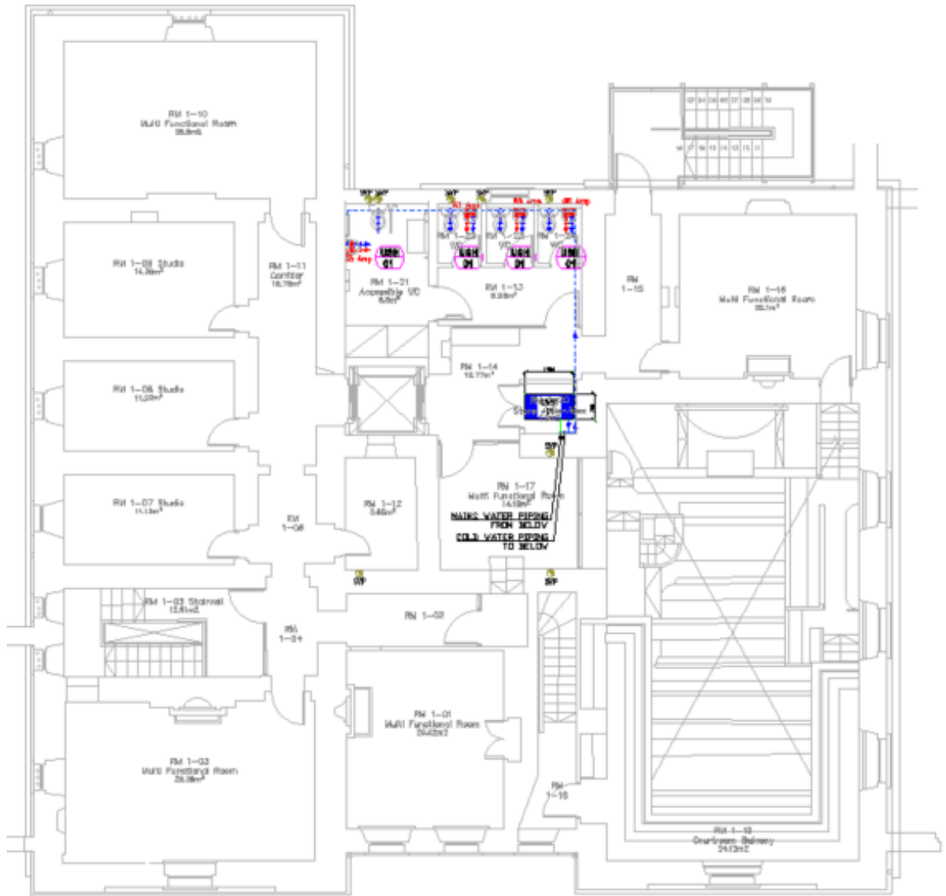

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P1	29.07.24	Issue for information	J.M.	P.P.
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ARCHITECTURE

We are a design led practice working at the intersection of contemporary design and creative conservation.

Throughout thirty-five years of practice we have established a strong design ethos with particular emphasis on creativity, collaboration and context. Our work includes - the design of new contemporary buildings; the adaptive reuse of existing buildings and the creative conservation of many important historic buildings and places. Each project is approached with an open mind as we develop our designs in close conversation with our clients and other designers. We have earned a strong and trusted reputation from our clients, peers, consultants and others with whom we collaborate, and the quality of our work has been recognised through many national and international awards.

ARCHITECTURE

AWARDS

RIAI Public Space Award 2021
King Johns Castle, Carlingford (Winner)

RIAI Adaptation & Reuse Award 2021
Merrion Square House (Highly Commended)

RIAI Conservation Award 2020
St. Bartholomews's Church (Commended)

RIAI Silver Medal 2019
Church of Carthage (Highly Commended)

RIAI Commercial/Retail Award 2016
The People's Park Pavilion (Winner)

RIAI Conservation Award 2015
St. Catherine's (Highly Commended)

IGS Conservation Award 2014
West Wing Russborough (Highly Commended)

RIAI Conservation Award 2014
West Wing Russborough (Winner)

RIAI Conservation Award 2012
Hotel Ard na Sidhe (Highly Commended)

IGS Conservation Award 2012
Hotel Ard na Sidhe (Highly Commended)

RIAI Conservation Silver Medal
Browne Clayton Column (Highly Commended)

IGS Conservation Award 2011
Russborough

RIAI Conservation Award 2008
Russborough (Highly Commended)

RIAI Conservation Award 2008
Killiney Obelisk (Commended)

OPUS Conservation Award 2005
Browne Clayton Column

OPUS Design Award 2004
Balgaddy

RIAI Conservation Award 2004
Dromoland Gazebo