

Offsite Construction Housing

Report by Kevin Anderson, Executive Director - Place

Report for Decision

1 Recommendations

It is recommended that Council;

- a) approves a pilot housing project of modular build in Newtongrange, Main Street (former swimming pool site) in 2026/27, and
- b) notes the Proposed Housing Demonstrator sites in Penicuik, with the delivery programme for this development (11 homes) scheduled to be received in November, 2024, also to
- c) consider the uncommitted site at Rullion Road, Penicuik (circa 50 homes) to be designated for a further offsite construction project in 2027/28.

2 Purpose of Report

- 2.1** At the Council Meeting held on 16 November, 2021, a Motion was approved in respect of the social housing programme strategy and construction. This report provides a progress update.

Midlothian Council acknowledges that there is huge demand for adequate and affordable housing across Midlothian, and that Council housing waiting lists currently have long waiting times.

The Council also notes that there are current significant pressures on the house building sector affecting both supplies of materials and labour, as a result of Brexit and other factors.

The Council should therefore reassess with urgency whether our current house building strategies are fit for purpose, and feasible within the current restraints.

The Council should also investigate other methods of construction for housing within the scope of its revaluation, including piloting the use of offsite construction housing.

Expanding the scope of construction methods would provide a cost effective solution in Midlothian that would provide homes that are fast and easily built, well insulated, long lasting and in line with our green agenda in Midlothian and across the world.

Date: 29 October 2024

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3. Background

Following the approval of the above motion, and in response to the need to investigate other methods of construction for housing, including piloting the use of offsite construction housing, Midlothian Council has been working to align its new housing development programme with the off site construction sector to establish whether there are benefits to the housing programme in terms of efficiency, cost and quality.

Off site construction, also known as Modern Methods of Construction (MMC), allows key elements of a building to be designed, planned and constructed using pre-fabricated or pre-assembled products that are manufactured in an offsite factory environment.

Since 2021, the Council housing development team has engaged as a partner in the South East with the Regional Delivery Alliance (the RDA, formerly known as the Edinburgh Housing Demonstrator), which is the off site construction initiative associated with the Edinburgh and South East Scotland City Region Deal. Our participation in the Pilot 3 stage involved a collaborative procurement incorporating several local authorities/Registered Social Landlords across multiple sites for a feasibility commission initially.

The first piece of work with the RDA has been to align the Council's house types with other affordable housing designs in the Edinburgh and South East Scotland Region.

This was carried out utilising a common design team with standardised house types developed to improve efficiencies in production through consistency of built areas, components, layouts, window and door openings etc, in order to enhance cost efficiencies and advantages to construction and maintenance and to unlock the circular economy potential. This Collaborative Feasibility commission provides a clear set of deliverables for each site that will create the conditions for successful delivery and bundling.

Having common house types was a critical first step in working with the off site construction sector, which requires limited variations to be able to deliver economies of scale for the housing sector in the city region.

Following this work, a series of sites were submitted to the Regional Delivery Alliance programme for design and survey work to test whether they were suitable to accommodate these house types. All sites needed to be new and additional sites to Midlothian Council's housing programme. This ensured there was no delays to the Council's existing programme of delivery or abortive costs associated with design work on our established sites that needed then to be re-worked.

Midlothian Council undertook a review of its garage and lock up sites as a potential source of future housing sites. From this review, and a wider scoping of land in Council ownership that had potential for

housing development, a number of sites were put forward for further assessment.

The approximate capacity of the suitable Midlothian sites is 11 homes, within an overall regional pipeline of 141 homes. Midlothian Council has entered into a Memorandum of Understanding to embed collaborative working across this programme. The pipeline sites have been procured appointing a single Contractor (CCG) using existing framework options and are in pre-construction phase. CCG are an established off site construction company that produces closed panel walled systems that combine with pre-fabricated roof and floor cassettes to create a home's superstructure. These panels can include insulation, internal wall linings, windows, doors and render. These panelised systems are pre-manufactured off site, allowing significantly quicker assembly of homes on site.

By working across the city region, as part of a larger programme of similar house types that have already been shared with the Contractor, the aim is to deliver economies of scale for smaller sites that they otherwise would not benefit from.

Proposed Housing Demonstrator sites in Midlothian

Site name	Location	Approx No. of homes	Build type
Eastfield Drive	Penicuik	4	Houses/Cottage Flats
Lyne Terrace	Penicuik	7	Houses/Cottage Flats

The City of Edinburgh Council (CEC) have acted as Lead Authority to procure the initial feasibility work for all sites. For the Pilot 3 phase, actual project procurement and delivery of Midlothian allocated sites will be handled by Midlothian Council directly. Additional sites can be added to the programme via the Scape framework.

The proposal from CCG with cost and programme dates is due to be provided in November 2024 for these Penicuik sites.

Modular Development

Another form of off-site construction is modular construction. This involves the assembly of 'modules' of housing off site which are then brought to site from their factory setting. This is slightly further along the off-site spectrum in terms of the level of pre-fabrication.

Modular design for manufacture and assembly can contribute to solving local problems: the challenge of zero carbon; failure of housing supply; the affordability crisis; poor build quality and cost of non-compliance; poor environmental performance and living conditions; safety; and workforce shortages.

Similar to sites for the Pilot 3, a site was required where there had been no design work done to date on it to avoid abortive costs or impact on the existing programme.

Previously a pilot site for modular construction was selected (site at Newtongrange Church Hall) and having issued an invitation to tender in April 2024 through the Scottish Procurement Alliance (SPA) NH3 Modular framework, Midlothian Council received only one tender response and this was non-compliant. The reason for this was that the planning consent for the site in question stipulated that the homes were to be a maximum of 1.5 storeys, with dormer windows on the upper floor. Unfortunately this was not a design that modular manufacturers were able to price for as was not one of their standard house types. Therefore, we were unable to appoint.

This site is now being re-assigned for development as a Regional Delivery Alliance project site so that it still benefits from off-site construction methods.

As an alternative site that is more suitable for the delivery of the standard house types needed for modular construction the former swimming pool site at Main Street, Newtongrange is available. This will require forward funding from the Housing Revenue Account in Phase 5 with affordability to be ascertained once a cost report is available as the site is at RIBA Stage 2(feasibility concept design) in the existing programme.

It is also proposed that Rullion Road, Penicuik as our only current uncommitted site is considered available for a modular development (circa 50 units). The date for delivery on this site is 2027/28 as approved in the SHIP agreed at October Council meeting

5 Report Implications (Resource, Digital and Risk)

5.1 Resource

During recent times the construction industry in Scotland and the UK has experienced unprecedented adverse market conditions, which has led to significant rises in tender prices for a wide range of materials. There is evidence that inflation of between 10% and 15% beyond BCIS predictions is affecting projects and whilst measures such as value engineering are partially mitigating cost increases, there is a risk that the capital budgets provided for delivery of the New Social Housing project will need to be increased with a resultant impact on the funding strategy

5.2 Digital

Not applicable

5.3 Risk

There is regular review of risk to ensure the retained risk in the new house building programme is of an acceptable and tolerable level to maximise opportunities and have full consideration of risk implications in achieving our aims and objectives.

Despite modular construction having been popular since prefabricated post-war buildings, and more recent technological advances having boosted its general acceptance as a construction method, Modular construction has experienced a problematic history as in recent years with around 10 offsite manufacturing initiatives having either withdrawn from the sector or gone into liquidation.

5.4 Ensuring Equalities (if required a separate IIA must be completed)

Equality is central to all housing and housing services delivery. An Integrated Impact Assessment (IIA) has been undertaken on the Local Housing Strategy 2021-26 to ensure that the needs of local communities have been fully considered. The SHIP reflects identified needs and draws on findings from the IIA when considering the implications flowing from the translation of strategic aims into housing policies.

5.5 Additional Report Implications (See Appendix A)

APPENDIX A – Report Implications

A.1 Key Priorities within the Single Midlothian Plan

Affordable housing, homelessness and health and social care outcomes through the provision of specialist housing.

A.2 Key Drivers for Change

Key drivers addressed in this report:

- Holistic Working
- Hub and Spoke
- Modern
- Sustainable**
- Transformational
- Preventative**
- Asset-based**
- Continuous Improvement**
- One size fits one
- None of the above

A.3 Key Delivery Streams

Key delivery streams addressed in this report:

- One Council Working with you, for you
- Preventative and Sustainable**
- Efficient and Modern
- Innovative and Ambitious
- None of the above

A.4 Delivering Best Value

We manage all aspects of our business so that tenants and other customers receive services that provide value for money in the rent and other charges they pay.

A.5 Involving Communities and Other Stakeholders

A full consultation in the current Rent Setting Strategy 2023/24-2025/26 and the Housing Allocation Policy 2024 was available to Midlothian Council tenants and waiting list applicants. Stakeholders are informed of outcomes at the regular Local Housing Strategy Forum meetings.

A.6 Impact on Performance and Outcomes

Not applicable

A.7 Adopting a Preventative Approach

Not applicable

A.8 Supporting Sustainable Development

Good practice in relation to energy efficiency and sustainability is contained in the SHIP and Local Housing Strategy 2021/22 – 2025/26.

Background Papers:

Midlothian Net Zero Housing Design Guide